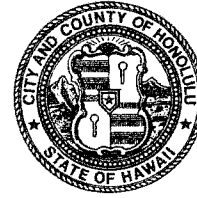


COASTAL VIEW STUDY

00076



Mayor's Message

I share with you great pride in the natural beauty of our island. A major element of Oahu's beauty is our coastline. We have dramatic bays such as Kaneohe Bay and Waimea Bay; prominent headlands and rocky cliffs such as Mauna Lahilahi and Makapuu Head; wide sand beaches such as Sunset, Maili and Kailua; and smaller islands such as Mokolii at Kualoa and Manana at Makapuu. Views of these coastal scenic resources and open spaces refresh us every day, and many hold special cultural significance for Hawaii's native people.

The Coastal View Study inventories coastal views around Oahu, and it recommends ways for the City to better manage development in order to preserve and enhance those views. The report will contribute, I hope, to wise planning decisions concerning the location and scale of resort, residential, and other urban activities along our coast; and to wise management decisions concerning the design and public amenities of such projects implemented through zoning and the Special Management Area (SMA) Ordinance. Particularly significant are the "Design Guidelines" proposed in the report.

As a companion to this volume, we are also publishing a "View Impact Assessment" manual for SMA permit applicants. The manual will aid applicants in preparing necessary view studies, and it will provide City decisionmakers with more and better information. The manual and the Design Guidelines contained in this report will make the SMA permit process more predictable for applicants.

As a unique natural and cultural resource and as a unique economic resource, Oahu's coast deserves our best effort at appropriate management.

A handwritten signature in black ink, which appears to read "Frank F. Fasi". The signature is stylized with a large, sweeping initial "F" and a distinct "A" and "S" at the end.

Frank F. Fasi, Mayor
City and County of Honolulu

COASTAL VIEW STUDY

prepared for: CITY & COUNTY OF HONOLULU • DEPARTMENT OF LAND UTILIZATION • 1987

prepared by: MICHAEL S. CHU • ROBERT B. JONES

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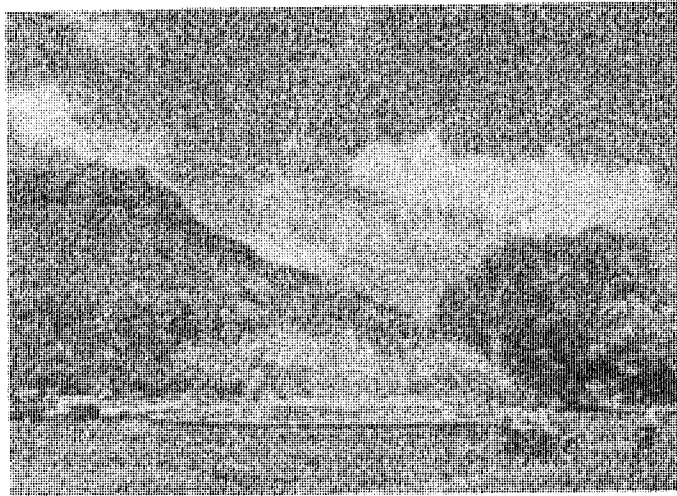
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1.1 View of Diamond Head



1.2 Lateral view of the shoreline and Kaoio Point



1.3 View of the Maunalua Bay

1. INTRODUCTION

The Coastal View Study is undertaken to address the issue of "preserving, maintaining, and where desirable, improving and restoring shoreline open spaces and scenic resources." The scope of this study includes an inventory of significant coastal views and coastal land forms which together, make up the shoreline scenic resources on Oahu.

The study includes views from public viewpoints and coastal roadways within the Special Management Area (SMA). It does not address more distant views of the coast, such as from mauka areas. Although development could have an impact on such views, the scope of this study was confined to views from the SMA.

Coastal views are visible from the coastal highway (or other important coastal roadways), from beach parks, and from other important public spaces within the coastal area. These views focus on significant vistas of the ocean, shoreline, scenic open spaces and coastal land forms with the primary viewing emphasis in the makai direction or laterally along the coast.

However in certain instances, views may reach beyond the SMA boundary to encompass certain mauka land forms which are visually inseparable from the coastal viewing experience.

The value of this study is three-fold. First, the inventory serves as an islandwide survey of coastal resources that should be considered prior to the development/improvement of land that fall within the SMA. Secondly, the study outlines a procedure for

managing coastal resources within the framework of the SMA. This procedure addresses applicant requirements, design guidelines for reducing visual impacts and options available to the Department of Land Utilization (DLU) in reviewing proposed developments/improvements. Finally, the study identifies areas within the overall regulatory framework where coastal view concerns may be strengthened.

Embodied within this report are the following:

- A summary of the enabling legislation regarding the management of coastal resources.
- A description of the inventory methodology and concepts used in the study
- Inventory maps
- Recommendations

Primary recommendations of this study include the following:

- Adoption of View Assessment Procedures for evaluating coastal scenic resources.
- Application of View Assessment Procedures for both private and public sector projects within the Special Management Area.
- Application of View Assessment Procedures in the Development Plan Land Use Map amendment process.
- Public views identified in the Special Provisions of the Development Plans should specify the corridor to be protected.
- Development Plan Special Provisions should avoid setting detailed standards which could limit the implementation of regulations intended to protect coastal scenic resources.
- Zoning Unilateral Agreements should omit references to the Special Management Area.
- Utilization of Design Guidelines and adoption of recommended SMA boundary amendments.

2. STUDY OVERVIEW

2.1 FEDERAL COASTAL ZONE MANAGEMENT ACT OF 1972

The Federal Act of 1972 represented the first comprehensive approach to managing the varied resources of the coastal areas. The competing demands upon the fragile environment of the coastal areas necessitated the initiation of a coordinated management program. The management program called for under the Federal Act:

"includes, but is not limited to, a comprehensive statement in words, maps, illustrations, or other media of communication, prepared and adopted by the State in accordance with the provisions of the act, setting forth objectives, policies, and standards to guide public and private uses of land and waters in the coastal waters."

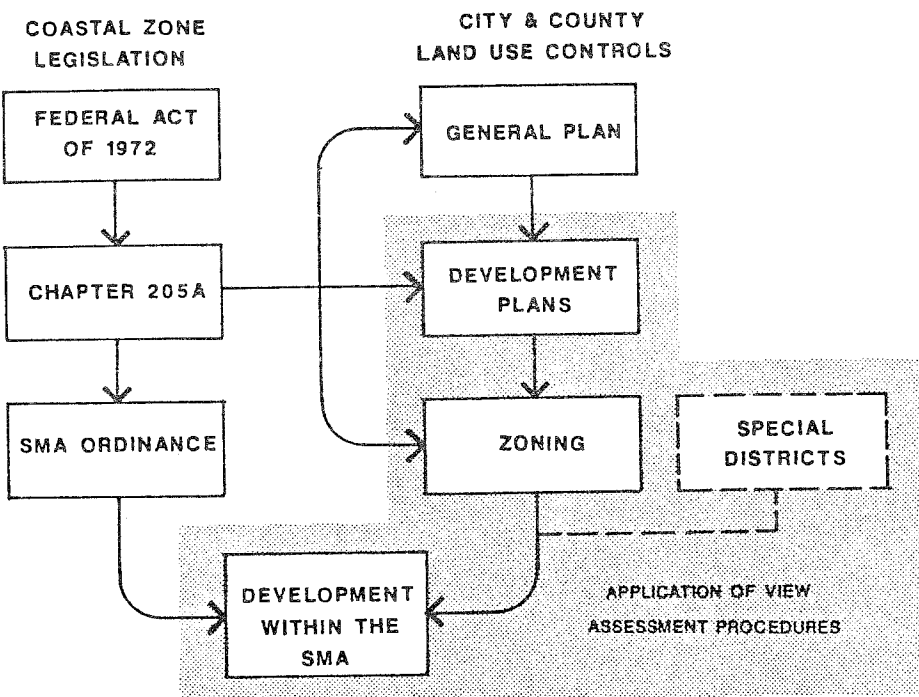
The Special Area Management Plan as defined in the national act means:

"a comprehensive plan providing for natural resource protection and reasonable coastal dependent economic growth containing a detailed and comprehensive statement of policies; standards and criteria to guide public and private uses for lands and waters; and mechanisms for timely implementation in specific geographic areas within the coastal zone."

The detailing of the plan is guided by the Act's findings, policy declaration and related program requirements, the latter of which includes "an inventory and designation of areas of particular concern within the coastal zone" and an organizational structure to implement the management program.

The Federal Guidelines state that areas of particular concern:

EXHIBIT 1 REGULATORY FRAMEWORK FOR COASTAL VIEWS



"shall be based upon a review of natural and man-made coastal zone resources and uses, and upon consideration of state established criteria which include, at a minimum, the following factors:

1. Areas of unique, scarce, fragile or vulnerable natural habitat, physical feature, historic significance, cultural value and scenic importance;
2. Areas of substantial recreational value and/or opportunity."

The ultimate management program adopted by the state must be approved by the federal government to participate in federal grants. The Hawaii Coastal Zone Management Program was approved by the federal government in 1978.

2.2 HAWAII COASTAL ZONE MANAGEMENT ACT (HCZMA)

Hawaii was quick to respond to the national act with the adoption of the Environmental Shoreline Protection Act of 1975 and then the adoption of the HCZMA in 1978.

The HCZMA sets out in detail the objectives and policies required by the national act. The Hawaii legislation sets forth seven management objectives as follows:

- Recreational Resources
- Historic Resources
- Scenic and Open Space Resources (protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources)
- Coastal Ecosystems
- Economic Uses
- Coastal Hazards
- Manage Development

The objectives are then detailed further into specific policies.

The policies for scenic and open space resources are broken out into four directives:

- Identify valued scenic resources in the coastal zone management area;

- Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline.
- Preserve, maintain, and where desirable, improve and restore shoreline open space and scenic resources; and
- Encourage those developments which are not coastal dependent to locate in inland areas.

The focus of this study will be upon the first three scenic and open space policies.

Economic Use and Managing Development objectives and policies also have residual relationships with scenic resources in the need to minimize adverse visual impacts and to effectively manage present and future coastal zone development.

The State Act (HCZMA) is divided into two parts. Part 1 includes the Coastal Zone Management Program Objectives and Policies and sets out the authority of the lead agency (the State Department of Planning and Economic Development) in administering the provisions of the act. The geographic limits of the authority granted under Part 1 include all lands on Oahu except for the Forest Reserve areas. This is known as the Coastal Zone Management Area

Part 2 of the act deals specifically with special controls on development which fall into the Special Management Area. Part 2 also includes a set of Special Management Area Guidelines which must be addressed in the review of projects which fall within the Special Management Area. These same guidelines are embodied within the Special Management Area ordinance.

The guidelines supplement the objectives and policies by instructing the approving authority of what specific environmental concerns need attention and what their action may embrace in acting upon a proposed development.

For example, the following guidelines would be applicable to the protection of scenic view resources:

"(1) All development in the special management area shall be subject to reasonable terms and conditions set by the Authority in order to Insure:

(D) Alterations to existing land forms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation, or failure in the event of earthquake.

(2) No development shall be approved unless the Authority has first found:

(B) The development is consistent with the objectives and policies and Special Management Area guidelines of this chapter and any guidelines enacted by the Legislature.

(C) The development is consistent with the County General Plan and zoning. Such a finding of consistency does not preclude concurrent processing where a General Plan or zoning amendment may also be required.

(3) The Authority shall seek to minimize where reasonable:

(D) Any development which would substantially interfere with or detract from the line of sight toward the sea from the State highway nearest the coast."

2.2.1 SUMMARY

The Special Management Area Guidelines cannot be applied to a development project in isolation from the Objectives and Policies of the CZM program. These two distinct elements in Chapter 205A must be viewed as a unit in implementing a comprehensive management program for the coastal area. As a unit they amplify the intent of the HCZM program and clarify the relationship between the land development policies and the environmental safeguards required in implementing those development policies.

The HCZM Act is not a substitute for the General Plan and its related land use policies found in the Development Plans and the Land Use Ordinance. Development within the SMA must be consistent with city policies. However, development within those prescribed land use policies must equally be consistent with the objectives, policies and special area management guidelines of the HCZM program.

An application for a Special Management Area use permit can be denied only if there are substantial adverse environmental or ecological effects which cannot be satisfactorily mitigated. Otherwise, it is not intended to prohibit development where the purpose of the HCZM Act can be achieved through modification of the proposed development or the imposition of mitigative measures as suggested in the language of the guidelines. For example, the first guideline states:

"(1) All development in the SMA shall be subject to reasonable terms and conditions".

The third guideline states:

"(3) The authority shall seek to minimize, where reasonable."

Policy (B) under Scenic and open space resources amplifies this intent with the language reference of "insure that new developments are compatible" and "minimize the alteration of natural landforms and existing public views."

The interplay between objectives and guidelines can best be illustrated in the example of evaluating projects which lie between "the line of sight toward the sea from the state highway." Taken literally the guideline would suggest that the interest is solely in protecting current views from the highway. However, the objective for Scenic and Open Space Resources is very broad in its implication and the opportunity to restore and improve is equally as important as protecting and preserving existing views. Therefore, in examining projects within the SMA, the opportunity to create new view corridors or improve existing views should also be examined.

The guideline defines the scenic resources to be protected as those which lie in the direction of the ocean. A narrow interpretation of the guideline and a literal interpretation of the term "shoreline" as used in the Scenic and Open Space Resource policies would lead to a definition of the coastal views as limited to the ocean itself and the high water line. These would be the sole scenic resources, or view objects, to be considered. Such an interpretation would be restrictive in evaluating the broad and dramatic views along Hawaii's coastlines, of which headlands such as Diamond Head, Maona, Lahilahi, and Makapuu Head are an intrinsic part.

A broader interpretation that includes coastal landforms -- landforms which are visually inseparable from the coastal viewing experience -- appears more reasonable, especially in light of the wordings of the Scenic and Open Space Resources objective and other elements of the policies. The objective calls for protecting and improving "coastal scenic and open space resources." The term "coastal," though not defined in the Act, is taken to encompass a much broader land area than merely the shoreline. Policy B speaks of insuring the compatibility of new developments "with their visual environment", of minimizing "alteration of natural landforms", and of minimizing the impacts of new development thereto. Again, these terms favor a broader geographic scope in addressing coastal scenic resources.

2.3 Related Coastal View Policies

Scenic resources have long been recognized as a dominant element in Hawaii's beauty. Maintaining a view relationship between the mountain and sea is of unparalleled importance to the resident in creating that special sense of identification with the community.

The significance of this community resource is best exemplified by its inclusion in the City Charter which calls for identification of "areas and sites ...of scenic significance."

2.3.1 GENERAL PLAN

Reflecting the mandates of the City Charter, coastal view objectives and policies in the General Plan fall within two subject areas, 1) Natural Environment, and 2) Physical Development and Urban Design.

Natural Environment

"The natural environment of our island, next to our people, is our greatest asset. The pleasure of a year round mild and amiable climate, beautiful mountains, attractive beaches, scenic vistas and natural drinking water are enjoyed by those of us who reside in the community as well as those who visit here. The City's policies seek to protect and enhance our natural attributes by increasing public awareness and appreciation of them and by mitigating against the degradation of these assets.

OBJECTIVE A

To protect and preserve the natural environment of Oahu.

Policy 1

Protect Oahu's natural environment, especially the shoreline, valleys, and ridges, from incompatible development.

Policy 2

Seek the restoration of environmentally damaged areas and natural resources.

Policy 3

Retain the Island's streams as scenic, aquatic and recreation resources."

OBJECTIVE B

To preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors.

Policy 2

Protect Oahu's scenic views, especially those seen from highly developed and heavily travelled areas.

Policy 3

Locate roads, highways, and other public facilities and utilities in areas where they will least obstruct important views of the mountains and the sea.

Physical Development and Urban Design

"Physical development and urban design is concerned with the quality of growth that occurs within various parts of the islands. The objectives and policies in this area of concern deal with the coordination of public facilities and land development, compatibility of land uses and specification of certain land uses at particular locations. Urban design emphasis is contained in objectives to create and maintain attractive, meaningful, and stimulating environments and to promote and enhance the social and physical character of Oahu's older towns and neighborhoods.

OBJECTIVE D

To create and maintain attractive, meaningful and stimulating environments throughout Oahu.

Policy 1

Prepare and maintain a comprehensive urban design plan for the island of Oahu.

Policy 2

Integrate the City and County urban design plan into all levels of physical planning and development controls.

Policy 4

Require the consideration of urban design principles in all development projects.

Policy 8

Preserve and maintain beneficial open space in urbanized areas.

2.3.2 DEVELOPMENT PLANS

In response to the objectives and policies of the General Plan several studies have dealt with the subject of scenic resources including the special studies prepared by Sedway/Cook, Aotani and Associates, and Phillips, Brandt, Reddick and Associates. These particular studies were islandwide and dealt with the total spectrum of protecting and improving the physical environment of Oahu.

These studies identified the island's major scenic resources and discussed the need for adopting regulatory procedures for protecting and enhancing the opportunity to continue to enjoy these natural scenic resources. Most of the scenic resources identified in these studies have been incorporated into the Development Plans.

The objectives and policies of the General Plan are more explicitly defined under the provisions of the Development Plans.

The protection and enhancement of view resources begin with the designation of land uses on the Development Plans. The categories for land development ranging from preservation to industrial along with their general height guidelines set the general character of the area and the setting within which view resources are either preserved or impacted.

The Development Plans Common Provisions under Section 4, General Urban Design Principles and Controls, call out the general guidelines for protecting public views and open space resources.

Section 4 in part states:

"Public views include views along streets and highways, mauka-makai view corridors, panoramic, and significant landmark views from public places, and view corridors between significant landmarks.

Such public views shall be protected by appropriate building heights, setbacks, design and siting controls established in the CZC. These controls shall be determined by the particular needs of each view and applied to public streets and to both public and private structures.

The design and siting of all structures shall reflect the need to maintain and enhance available views of significant landmarks. No development shall be permitted that will block important public views."

The Special Provision section of each Development Plan then proceeds further to list the views and open spaces to be protected. The special provisions establish overall height guidelines and in some instances, for selected projects, suggest principles and controls such as shoreline setbacks and building heights to minimize adverse impacts upon designated views.

These policies and guidelines are not ends in themselves which will protect the identified views. They merely represent the first step in establishing the relationship between land development and coastal view resources. They also set in motion the basic zoning controls to be adopted and the basic parameters for project review under the SMA regulations. Finally, they set the framework for all public agency projects.

2.3.3 REGULATORY CONTROLS

Implementing General Plan and Development objectives and policies is largely the function of zoning regulations. However, all City agencies are responsible for carrying out the intent of the General Plan and Development Plan provisions through their various rules, regulations and procedures as noted under Section 4 of the Common Provisions of the Development Plans.

As previously stated, the basic character for land development is defined under the provisions of the Development Plan for each area of the island.

As a result, the regulatory measures for view protection must fall within this framework of land development policy. There are two regulatory controls applicable to protecting the views identified in the Development Plans.

The first is the Land Use Ordinance. This ordinance permits the creation of Special Districts that can be used to protect significant views and landmarks. Examples are the Punchbowl, Diamond Head and Capital Districts. This mechanism is employed to deal with large areas which have broad community interest. Another technique is to adjust the zoning district height limits and building setbacks to fit the special circumstances required for view protection. Scenic resources falling outside the special districts and the general zoning district regulations can be controlled under Optional Development Regulations, which permit the imposition of development controls on specific projects such as cluster development to protect views. An application under the Optional Development Regulation is at the discretion of the land developer who may or may not wish to be subjected to such project review.

The second regulatory measure for coping with view protection is the Special Management Area Ordinance. This ordinance does not set land use development policy or the urban design principles and controls. Its intent is to manage development within this overall framework of land use policies and to mitigate adverse impacts on coastal resources should they become evident in a proposed project.

The SMA ordinance cannot protect or preserve scenic resources if such action would preclude the uses permitted under the Land Use Ordinance, providing the development does not have any substantial adverse environmental or ecological effects. The SMA process may restrict height and density in the interest of coastal view preservation, but it cannot alter the use permitted by the zoning regulation. The zoning regulations represent the basic land uses, densities and heights adopted under the Development Plans. It is at the Development Plan stage where the question of land uses related to view preservation and enhancement need to be examined.

There are some instances where the zoning and SMA ordinances overlap such as in the Waikiki and Diamond Head Special Districts. Both ordinances are administered by the Department of Land Utilization with SMA projects requiring final approval by the City Council. Since DLU is responsible for project evaluation under both regulations, there is a consistency in assessing project impact on scenic resources.

3. METHODOLOGY

3.1 RESOURCE REFERENCES

The Pacific Urban Studies and Planning Program of the University of Hawaii undertook an extensive study for the State of Hawaii in 1975 to develop a Coastal Zone Management Program for Hawaii. Of primary interest was identifying the "range of coastal problems" to be included in the management program. The study identified nine coastal water purposes:

- Conservation of coastal water ecosystems
- Management of waste water
- Conservation of coastal terrestrial ecosystems
- Conservation of sand resources
- Storm wave and tsunami hazard reduction
- Enhancement of coastal recreational opportunities
- Preservation of historic and cultural resources
- Preservation of scenic and aesthetic resources, and
- Identification of land and water areas having high potential for meeting particular societal requirements.

Of particular interest to the Coastal View Study is the Preservation of Scenic and Aesthetic Resources.

The study identified two methods for identifying scenic resources. The first was to concentrate on specific visual elements and to develop an inventory of those resources which should be protected.

The second method was to consider scenic resources as a visual system that included the specific resource and the vantage point that permits the best appreciation of the resource. This latter approach was selected for the Coastal View Study.

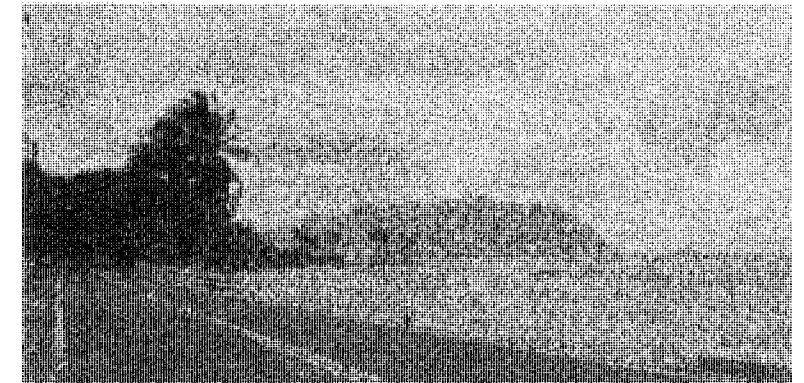
This early effort to define a management system for scenic resources identified three basic requirements:

- An inventory of scenic sites and districts
- An indication of the value associated with each resource
- A design methodology for the location of man-made structures on the site

While this early study was commissioned to determine those coastal resources which should fall within the management program and to focus on the delineation of the island coastal boundary, the study set the stage for an on-going program for refining the objectives and policies of the state act.

Several other studies were reviewed and are listed in the Bibliography of this report.

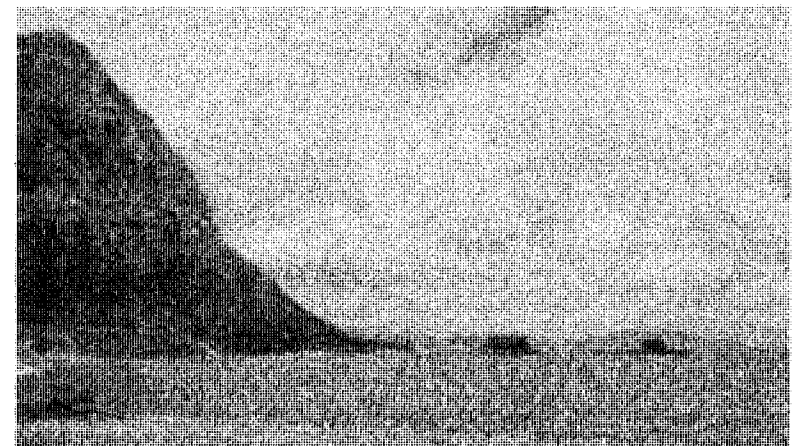
The Esthetic Visual Resource Management for Highways, Jones and Jones, Toner and Associates and R. Burton Litton Jr., 1977, and Hawaii Coastal Zone Management Program, Technical Supplement No. 8 were of particular value. Two important concepts were derived from the Jones and Jones work. The first is the concept of "viewsheds". A viewshed is the entire surface area visible to an observer from a viewing point. At a macro scale, this concept is a useful organizational tool and sets the context for the identification of visual resources and the determination of the visual quality within a viewshed. For example, the sweeping crescent forms of Waimanalo Bay, Kailua Bay, and Kaneohe Bay represent three distinct viewsheds within the Koolau-poko area. Distinction is derived from its physical shape and can usually be further distinguished by land use patterns and environmental character. As an example, the Waimanalo



3.1 Kaneohe Bay Viewshed



3.2 Kailua Bay Viewshed



3.3 Waimanalo Bay Viewshed

Bay Viewshed is enclosed by the Koolau Mountains, Makapuu Point and Wailea Point. Low density land uses and stretches of barren coast line typify the viewshed. In contrast, the Kailua Bay viewshed is confined by two coastal land forms (Mokapu Peninsula and Lanikai). Land uses are intensely residential and establish a different setting for the application of view criteria.

The second Jones and Jones concept pertains to the character, or "visual quality" of an area. The terms of vividness, unity and intactness used in this study are modified versions of the terminology presented in the report, Esthetic Resource Management for Highways, Jones and Jones, et al, 1975.

Vividness - Memorability of a landscape is derived from contrasting landscape components as they combine to create striking and distinctive visual patterns, taking in account form, line, texture and color.

Unity - The degree to which the visual resources of a landscape scene join together to form a coherent, harmonious visual pattern; a balanced composition between manmade and natural elements.

Intactness - The extent to which the landscape is free from visually encroaching features.

The quality of a particular view may represent more than one of these visual characteristics (see Exhibits 2, 3 and 4). The use of these concepts are valuable terms in describing and understanding the physical attributes of a view and the context of a viewshed. view analysis, when performed for a proposed development project should begin from this conceptual level.

The third concept, developed by Dr. Luciano Minerbi, pertaining to "intrusion of structures in the visual field" and the "lines of demarcation (skyline, waterline, shoreline, landline)" provided valuable insight into determining qualitative standards in assessing views and the implications of proposed development.

3.2 IDENTIFICATION OF VIEW CONCERNS AND OPPORTUNITIES

The identification of view concerns and opportunities is based on the inventory and underlying DP land use designation, taking into account allowable development potential. Recommendations generally are of three types:

- Situations where views of exceptional visual quality should remain unaltered.
- Situations where significant views may be lost or diminished due to future development. In such situations, design techniques may be appropriately used to minimize visual impact.
- Situations where limited or no views are presently available; however, enhancement opportunities may be possible. In these locations, the opportunity is in future redevelopment, lot consolidation, site planning, maintenance of roadside vegetation, development of parks and other public facilities, as opposed to a specific land use conflict.

The inventory of views and view objects catalogued in the earlier studies as well as this study include scenic features outside the Special Management Area though most fall within the CZM area for Oahu. While the focus of this report is upon coastal scenic resources, inland land forms need to be addressed where such inland view objects bear a relationship to the experience and quality of coastal views.

In many instances, the orientation of the coastal highway or the remoteness of inland land forms will be factors in determining what scenic resources fall within a coastal view. For example, Waianae has a number of significant land forms such as Puu Mailili, which do not fall within the SMA boundary. Yet because

of their dominance in relationship to the coastal highway and the shoreline they are integral components of the coastal view.

On the other hand there are portions of the Waianae Mountains such as in the Lualualei area which are beyond any conceivable relationship with the coastline. This is not to say that these mountain ranges in themselves are not dominant view objects worthy of protection, but the means for retaining their visual quality is beyond the regulatory controls of the Shoreline Management Area Ordinance. Other examples include the Koolau Mountains at Sacred Falls State Park, the Pali and the Koolau Mountains which serve as a backdrop for Honolulu.

VIVIDNESS

The vividness or memorability of a landscape is derived from contrasting landscape components as they combine to create striking and distinctive visual patterns, taking into account form, line, texture and color. An example of high vividness is photo # 3 which combines land form, coastline and ocean texture/color into a striking and memorable scene.

Within coastal areas, the most scenic views are often captured when viewing laterally along the coastline. Such views capture the contrast between ocean and land form, usually in a distinctive visual pattern. Views at a strict 90 degrees from the shoreline, with no particular view object or contrasting form, may appear boring and flat (photo #1).

Within suburban and highly urban environments, manmade developments can often provide vivid scenes as in photos #6 and #9. Designers may deliberately seek to create a high degree of contrast for a particular building or urban setting. However too many visually contrasting elements may cancel each other out and result in a scene of low memorability.

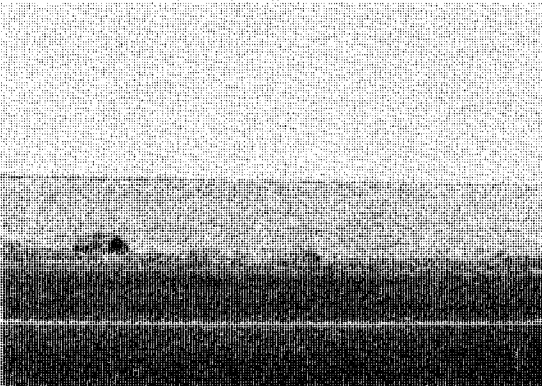
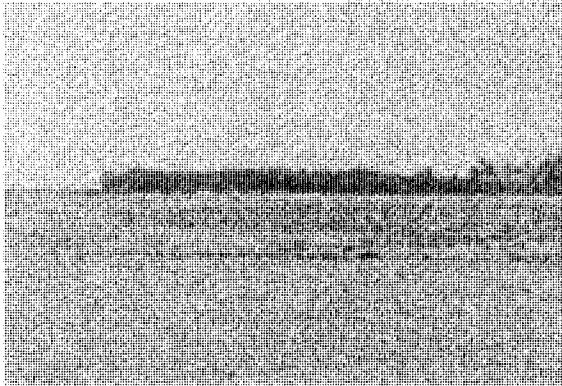

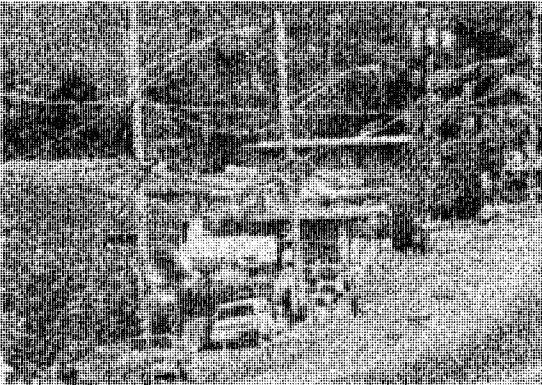


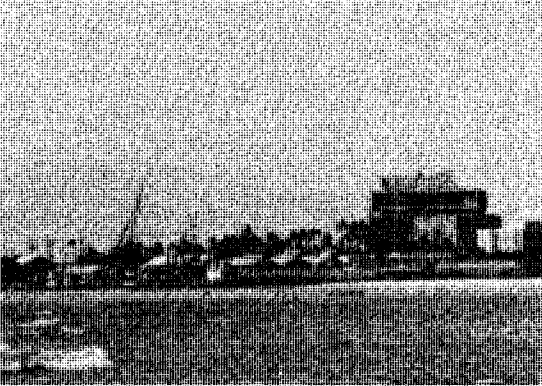
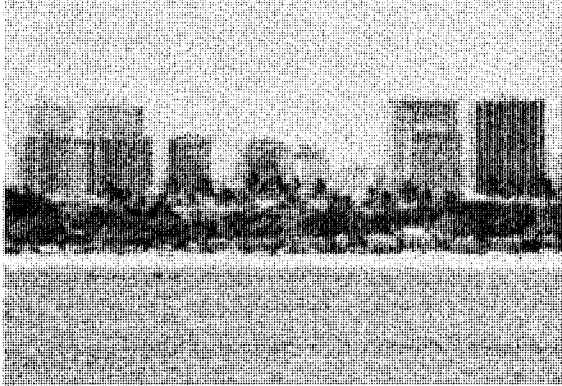
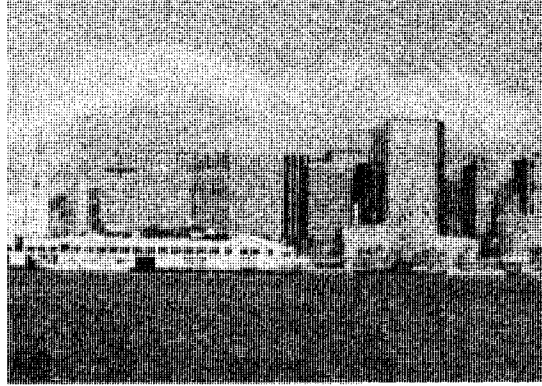
LOW	MODERATE	HIGH	
 1	 2	 3	RURAL/NATURAL
 4	 5	 6	SUBURBAN
 7	 8	 9	URBAN

EXHIBIT 2
VISUAL QUALITY, VIVIDNESS

INTACTNESS

Visual intactness refers both to the integrity of visual patterns and the extent to which the landscape is free from visually encroaching features.

In a predominantly natural environment, such as photo #3, any imposition of manmade elements would reduce the overall intactness of the view.

In suburban and urban environments, visual intactness can be measured by assessing the consistency and order of the visual pattern. Views of the downtown skyline for example, are considered intact relative to its highly urban setting, while the visual intactness of the canal (photo #6) is maintained through vegetative mass that screens the houses behind.

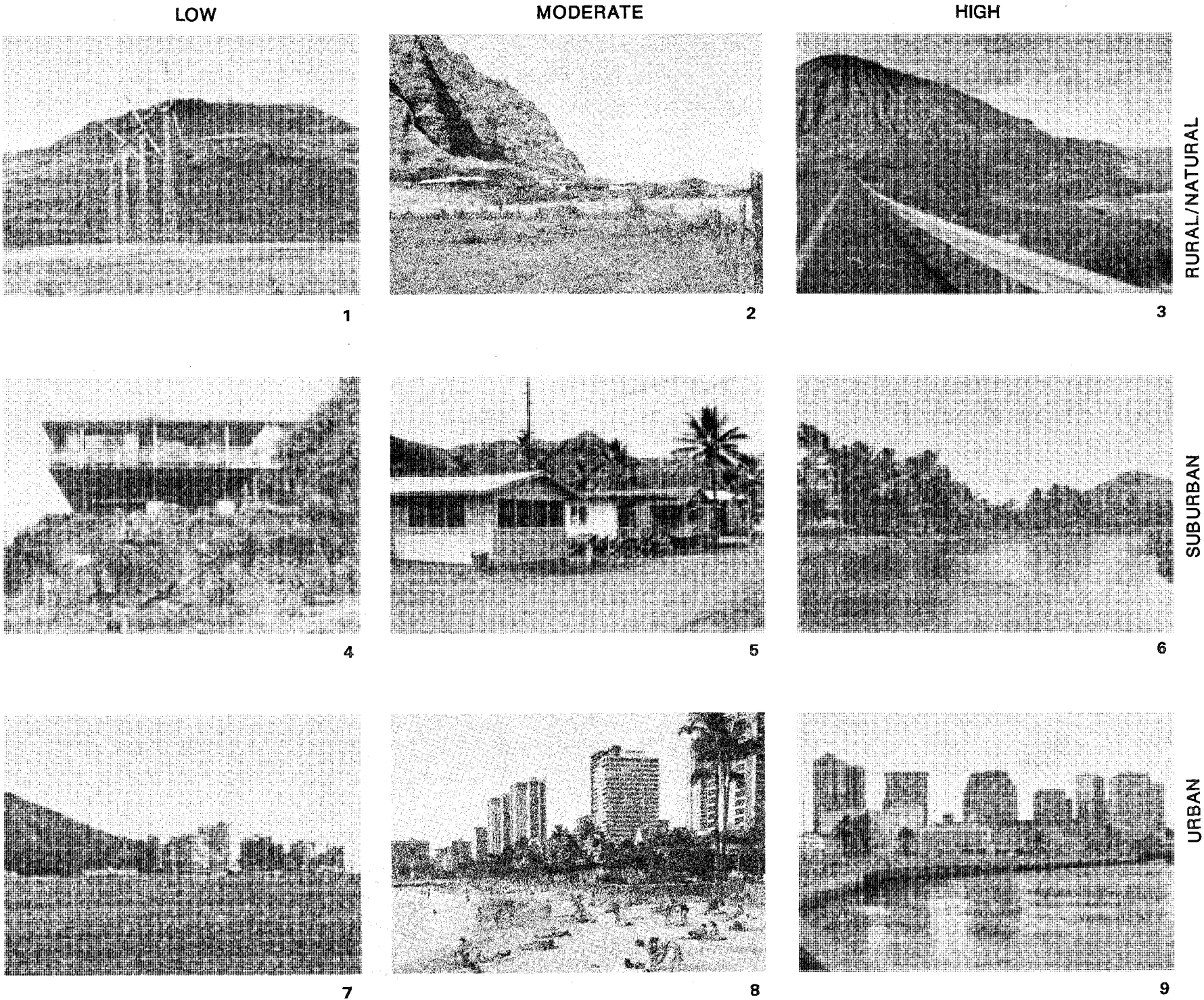


EXHIBIT 3
VISUAL QUALITY, INTACTNESS

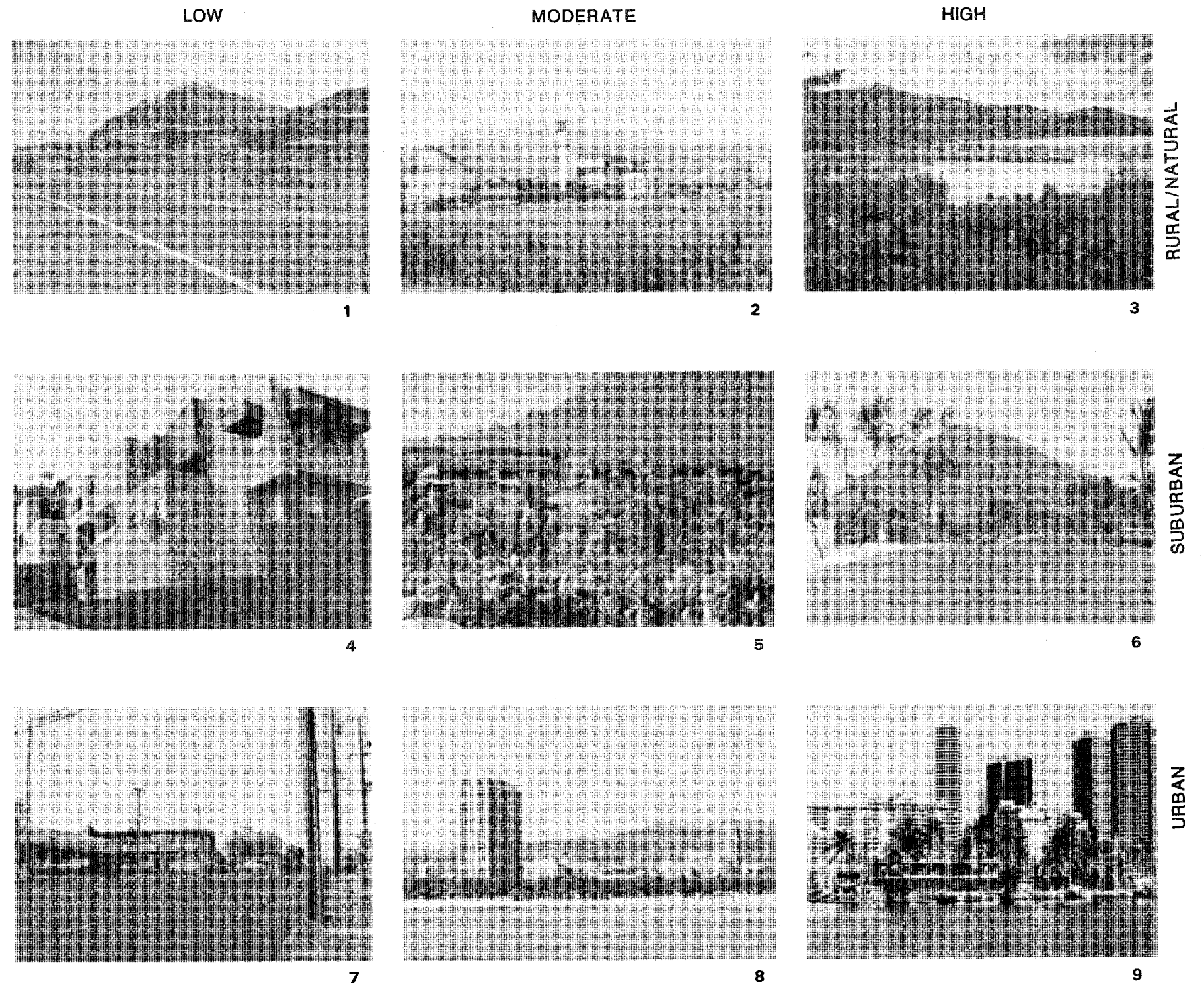
UNITY

Unity is the degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern. The key criterion of unity is the composition and balance between manmade and natural pattern elements.

In a rural setting, the Heeia Boat Harbor (photo #3) represents high unity as it forms a harmonious pattern between the man-made piers and the natural environment. The fencing and siting of building in photo #1 illustrates low unity due to its lack of integration with its setting.

Views within suburban environments that encompass natural features (photo #6) or blend with its natural surroundings (photo #5) are considered to possess high visual unity.

Unity in an urban setting can be achieved even in the absence of natural landscape elements. In such cases (photo #9), high unity is based on the overall order and composition of the visual forms. Photo #7 demonstrates low unity due to its chaotic and jumbled visual qualities.



4. INVENTORY OF VISUAL RESOURCES

The identification of visual resources along the coastal areas of Oahu consisted of researching existing information and field work. While information was drawn from several sources, two existing documents were of particular use due to their islandwide perspective. These two studies were:

Honolulu Urban and Regional Design Study, Sedway, Cooke and Aotani and Associates

Oahu Urban Design Study, Phillips, Brandt, Reddick

The field work was performed according to Development Plan districts utilizing DP land use maps. Views from the coastal highway and other important coastal roads, beach parks and scenic lookouts were inspected. Color photos and video taping were taken to document the views from each location.

Significant findings were transferred to half size DP land use maps and are represented in Exhibits 6 through 18.

In addition to "viewshed" and "visual quality," other terminology and concepts are used in discussing the findings of this project.

View Object- View objects refer to physical elements that are the focus of a particular view. View objects normally include historic sites or places, landmarks, the ocean and its shoreline, land forms such as mountains and descending ridges, and may also include significant vegetation and open spaces. Manana Island as seen from the Makapuu lookout, or Diamond Head as seen from many locations along the south shore of Oahu are examples of view objects.

Coastal Land Form- Coastal land forms refers to land masses that are prominent features within the coastal view such as Mauna Lani along the Waianae coast or Koko Crater in East Honolulu. Coastal land forms are generally established landmarks however at a micro scale, smaller land masses such as the bluffs at Pounders Beach or the sand dunes at Kahuku are considered to be coastal land forms.

Coastal View- A coastal view is a scene which is visible to an observer from the coastal highway, from coastal beach parks, or other public scenic points within the coastal area.

Lateral Coastal View- Views which run parallel to the shoreline, encompassing both the ocean, the shoreline and portions of the land mass often provide the most dramatic and vivid scenes. Lateral views is therefore distinctive types of coastal views. Views from Halona Point and Makapuu lookout are examples of lateral coastal views.

Continuous Views- Continuous views refer to stretches of coastal highway (or other important coastal roadways) which provide the driver with unobstructed views of the ocean, shoreline or other important coastal land forms. The viewing direction is makai or laterally along the shoreline. Farrington Highway within the Makua Viewshed is a prime example of a continuous view.

Intermittent View- Intermittent views refer to stretches of the coastal highway (or other important coastal roadways) which provides the driver with limited coastal views of the ocean, shoreline or other important land forms. The viewing direction is makai or laterally along the shoreline. Such views may be partially obstructed with buildings or vegetation. An example of intermittent views occur in the North Shore along Kamehameha Highway at Kawaihoa Beach where a series of narrow view corridors, broken by house and vegetation, provides the driver with significant coastal views.

Stationary View- A stationary view refers to a specific location, such as a scenic lookout or beach park, where significant views can be seen by the pedestrian. While pedestrian views can be found from most shoreline areas, stationary views in this study are reserved for established and recognized viewing points such as the Diamond Head lookouts, Heeia State Park or Magic Island.

Open Space/Important Landscape- Open space/important landscape refers to areas such as the Ironwood forest along Kalanianaʻole Highway in Waimanalo or the agricultural lands flanking the highway in Kahuku. Such open spaces are significant contributing factors in establishing the character and visual quality of the viewshed.

Based on the scope of this study, the context for using these terms are generally confined to the geographical boundaries described by the Special Management Area and the viewing directions generally imply a makai or lateral direction.

Graphic techniques are used to identify the findings of this inventory. Due to the scale of the base maps, the information presented must be considered a general overview. For example smaller land form such as the Pounders bluffs or every narrow view corridor are not fully recorded in this islandwide inventory. Future development projects should use these inventory maps as a starting point in performing their individual view assessments, with greater focus on the specific coastal resources and other details surrounding their development proposals.

5. NORTH SHORE

Due to its configuration, the North Shore is considered to be a single viewshed, containing over 20 miles of coastline, extending from Kaena Point to Kawela Bay. It is a rural district noted for its low rise and low density residential uses, and recreational/scenic resources.

The overall viewshed with its oblique shoreline consist of varying degrees of vividness, unity or intactness.

Dominant scenic resources include the Koolau and Waianae Mountains, Kaena Point, Paukawila Stream, Kaiaka Bay, Haleiwa Boat Harbor, Anahulu Stream, Lokoea Pond in Haleiwa, Waimea Bay, Pupukea Beach Park and agricultural lands that provide a sense of open space or visual access to the mountain ranges. Public views identified in the Development Plan include:

- Panoramic views of Waimea Bay to Sunset Beach from Pupukea Highlands
- Views of Waimea Bay from Kamehameha Highway bridge
- Panoramic views of Haleiwa to Kawaihoa from the area near the hairpin turn of Kawaihoa Drive
- Panoramic views of Waialua and Haleiwa Town from the Wahiawa approach of Kamehameha Highway and Kaukonahua Road
- Views of the Waianae mountains from Kaukonahua Road and Kamehameha Highway in Haleiwa
- Ocean views from Kamehameha Highway between Kawaihoa and Sunset Beach
- Views of Anahulu Stream from Kamehameha Highway near Anahulu River

Within the North Shore Viewshed, five distinct sections are defined. They are:

Section A, Kaena Point
Section B, Mokuleia
Section C, Haleiwa
Section D, Kawaihoa
Section E, Sunset Beach

5.1 SECTION A OF THE NORTH SHORE VIEWSHED, KAENA POINT

Section A is from Kaena Point to Crozier Drive. The SMA boundary coincides or lies a few hundred feet mauka of Farrington Highway and Crozier Drive.

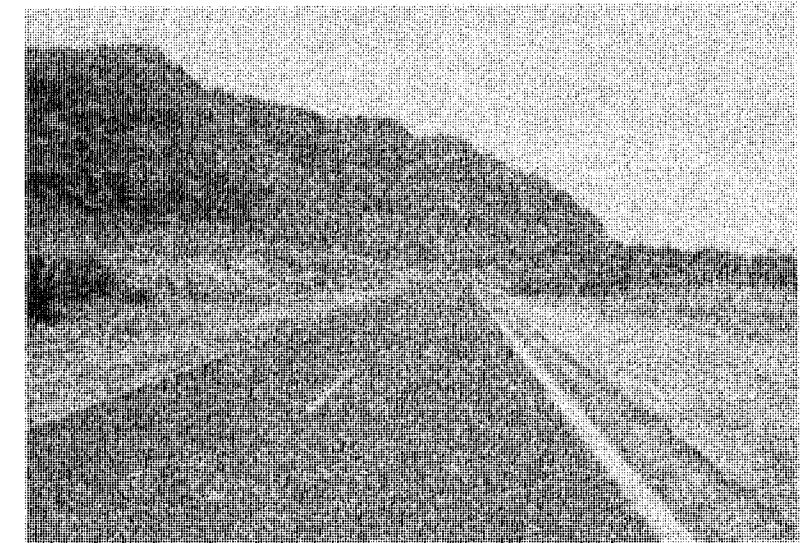
The entire stretch of Farrington Highway, up to Crozier Drive, is highly intact, consisting of several stands of Ironwood trees and other natural vegetation. Buildings are low and dispersed across the landscape, adding to a strong rural flavor and a sense of unity. The shoreline is accessible in a number of locations and views from the shoreline demonstrate the expansiveness of the North Shore viewshed.

Primary views from the coastal highway include several stretches of continuous ocean views, views into significant landscape/open spaces such as the polo field, Mokuleia Beach Park and the Ironwood forest and mauka views of the Waianae Mountains. Although no particular reference is made in the DPs concerning the visual importance of this section, the overall intactness of the area is unique to Oahu.

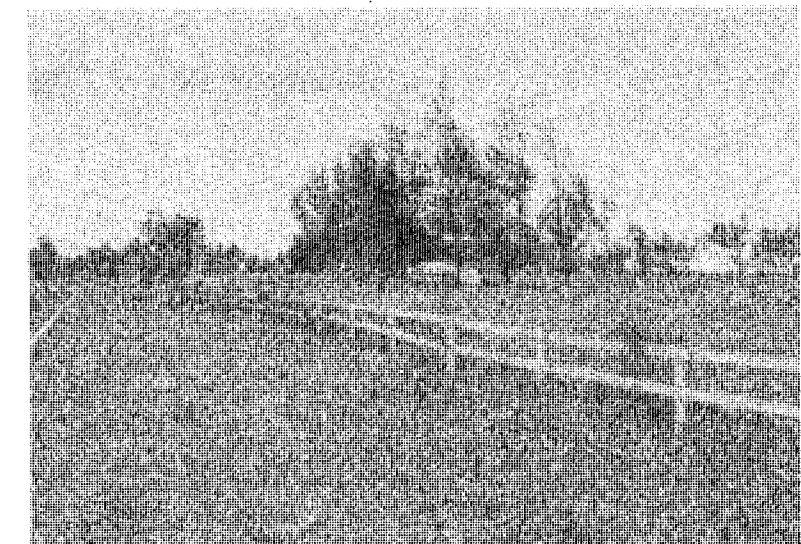
Significant Views

NS-1

Continuous makai views of the coastline and mauka views of the Waianae Mountains as seen from Farrington Highway.



5.1 Roadway view of the intact section of the North Shore Viewshed, Kaena



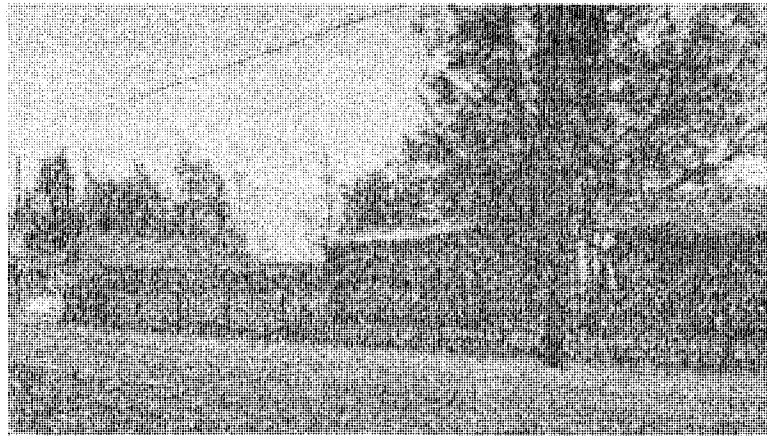
5.2 Important open space along the coastal highway

NS-2

Intermittent makai views of ocean, Mokuleia Army Beach, Mokuleia Beach Park polo field and open space/important landscape.

Significant Stationary Views

Significant stationary views are from the shoreline at Mokuleia Army Beach and Mokuleia Beach Park.



5.3 Private camp ground along the coastal highway in Mokuleia



5.4 Bridge at Haleiwa

5.2 SECTION B OF THE NORTH SHORE VIEWSHED, MOKULEIA

Section B consist of the residential community along Crozier Drive. The SMA boundary swings makai from Farrington Highway and follows Crozier Drive to Waialua Town. The makai side of the road is completely lined with houses and prevent any viewing opportunities in the makai direction. In contrast, the mauka views are across agricultural land and provide panoramic views of the Waianae Mountains in the distance.

Significant Roadway Views

NS-3

Continuous mauka views from Crozier Drive.

5.3 SECTION C OF THE NORTH SHORE VIEWSHED, HALEIWA

Section C ranges from Kaiaka Bay to Puaena Point and includes Waialua and Haleiwa Towns. The SMA boundary includes portions of Waialua and most of Haleiwa. In addition to the SMA, portions of the viewshed are controlled by the Haleiwa Special District which emphasizes the preservation of buildings and scenic sites of cultural and/or historic significance.

The visual quality of Haleiwa is based primarily on the unity demonstrated between its natural/agricultural landscape and the structures and buildings making up its manmade environments. The unity is exemplified through a deliberate architectural style, height and signage controls, and other conscious measures aimed at preserving and enhancing the visual character of the area.

The visual quality of Haleiwa is most apparent along stretches of Haleiwa Road and Kamehameha Highway where significant sites, buildings of historic significance and coastal views can be seen.

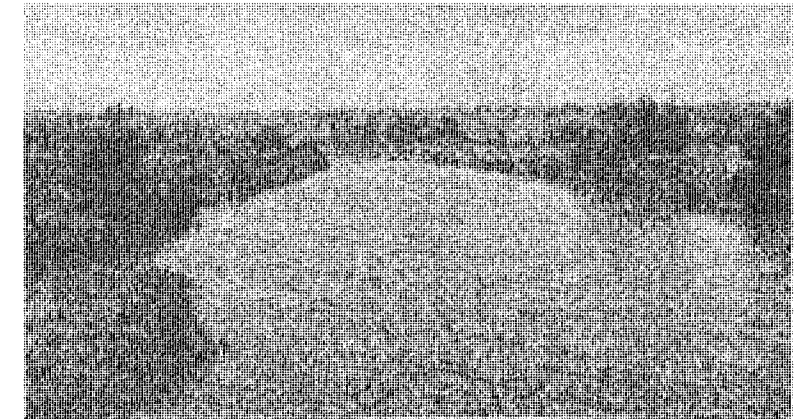
Significant Roadway Views

NS-4

Continuous makai views along Haleiwa Road into Haleiwa Alii Park, Haleiwa Boat Harbor and Haleiwa Beach Park. Continuous mauka views along Kamehameha Highway of Anahulu Stream and Lokoea Pond.

Significant Stationary Views

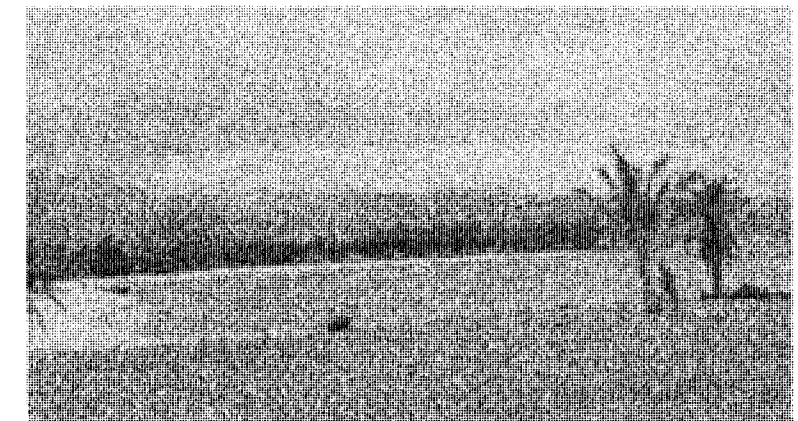
Stationary views are from Kaiaka State Recreational Park, Haleiwa Alii Beach Park and Haleiwa Beach Park.



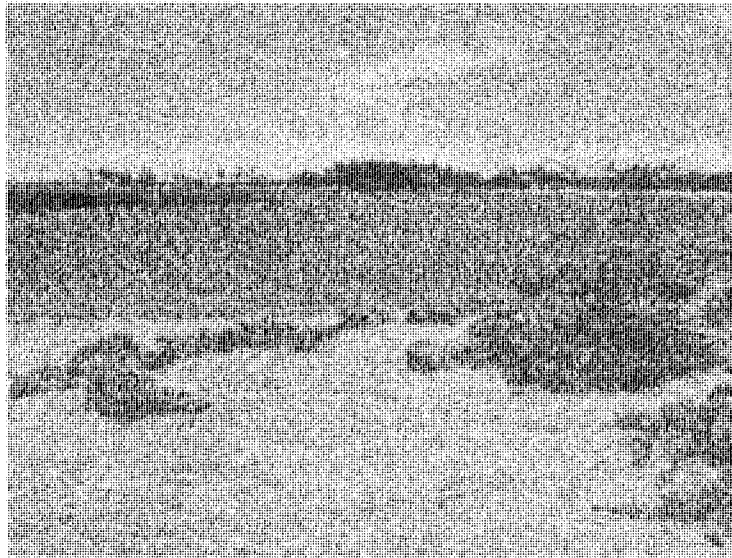
5.5 Makai view of the Paukauila Stream in Waialua



5.6 Haleiwa Boat Harbor



5.7 View of the Mokuleia area from Kaiaka State Recreational Park



5.8 View of Puaena Point from the shoreline at Haleiwa Aili Beach Park

5.4 SECTION D OF THE NORTH SHORE VIEWSHED, KAWAIILOA

Section D consist of 3.5 miles of coastline from Puaena Point to the Wananapaoa Islands at Waimea Bay. This stretch of shoreline is known as Kawailoa Beach and contains many of the famous surfing sites on Oahu's North Shore.

Two specific public view references are made in the Development Plans regarding Kawailoa. These views consist of several breaks between residential lots on the makai side of Kamehameha Highway. These breaks are relatively small and are further diminished by encroachment from vegetation and parked cars which often fill the view corridor. The visual significance of Kawailoa as seen from the coastal highway, is based on this sequence of small view openings as seen in quick succession rather than on any single coastal view.

Significant Views

NS-5

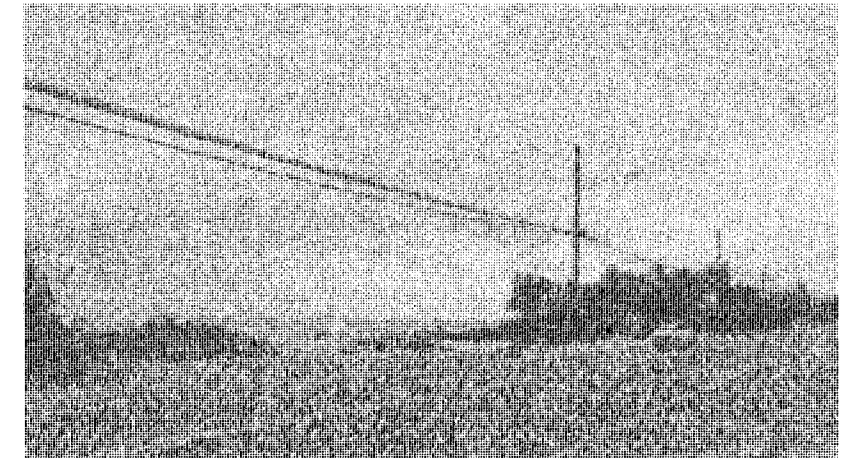
Series of makai view corridors as seen from Kamehameha Highway.

5.5 SECTION E OF THE NORTH SHORE VIEWSHED, SUNSET

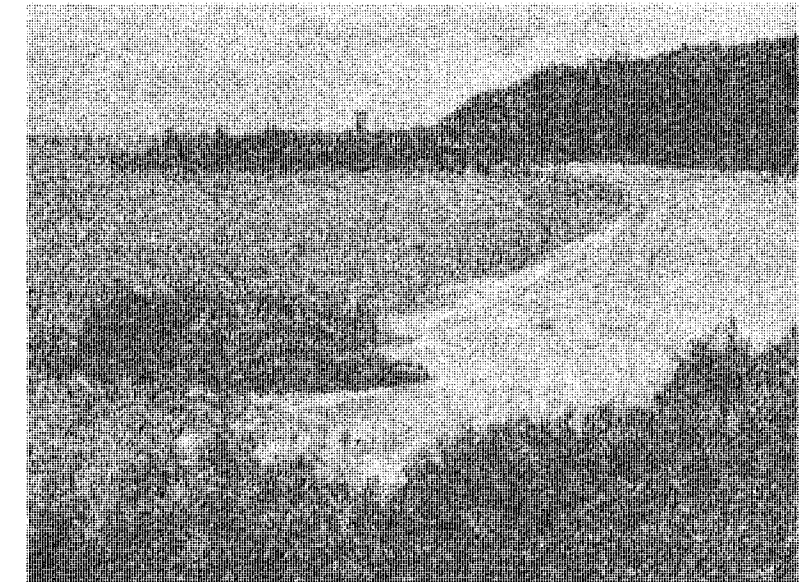
Section E consist of 5.75 miles of coastline from Waimea Bay to Kawela Bay. The SMA boundary lies mauka of Kamehameha Highway which includes all of the residential development below the Koolau bluffs. Three specific public view references are listed in the DPs regarding coastal views within this section. These references focus on the views of "Waimea Bay" and other "ocean views from Kamehameha Highway between Kawailoa and Sunset Beach."

The coastline from Pupukea Beach Park to Sunset Point is designated as Park, providing the pedestrian with unobstructed, high quality coastal views from the shoreline. Except at Waimea Bay, such views from the coastal highway are limited by the roadside vegetation and residential lots on the makai side of the road.

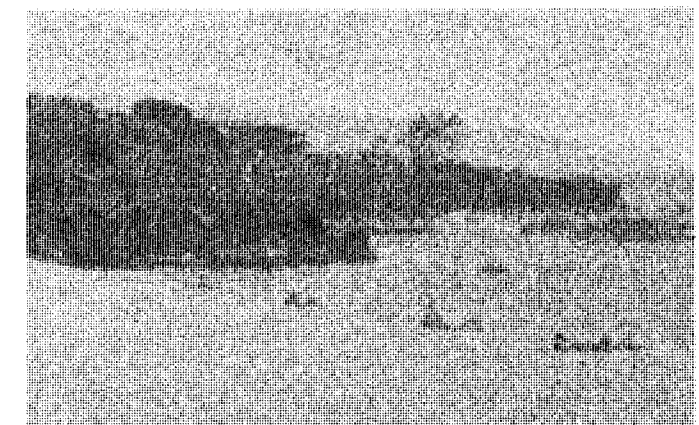
Waimea Bay, because of its shoreline configuration and topographic variations is essentially a self-contained viewshed. It has high quality visual characteristics of vividness, unity, and intactness. Urban encroachment into the bay is of minimum consequence with the historic fire tower on the Kahuku side being the only major visible structure piercing the horizon.



5.9 One of several view openings along Kamehameha Highway fronting Kawailoa Beach



5.10 View across Waimea Bay



5.11 Shoreline view of coastal land forms and building encroachment, Waimea Bay

Significant Roadway Views

NS-6

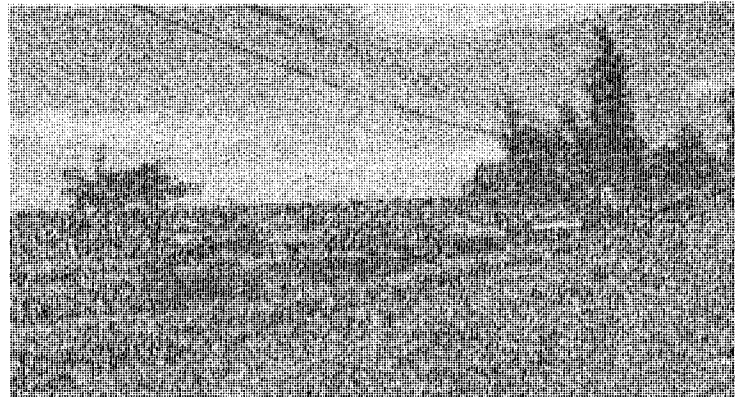
Makai views from Kamehameha Highway looking across the bay (from both sides of Waimea Bay) and continuous intermittent views at the area fronting Pupukea Beach Park.

NS-7

Intermittent makai views from Kamehameha Highway between Pupukea Beach Park to Sunset Beach. Most viewing opportunities are blocked by vegetation, earth mounds and residential structures however a few small view opening can be found primarily at beach parks. The largest view opening is at Sunset Beach.

NS-8

Intermittent makai views from Kamehameha Highway. Views also include important open space (agriculture) and landscape features (Ironwood trees).



5.12 View from Kamehameha Highway at Pupukea Beach Park



5.13 Large view opening at Sunset Beach

Significant Stationary Views

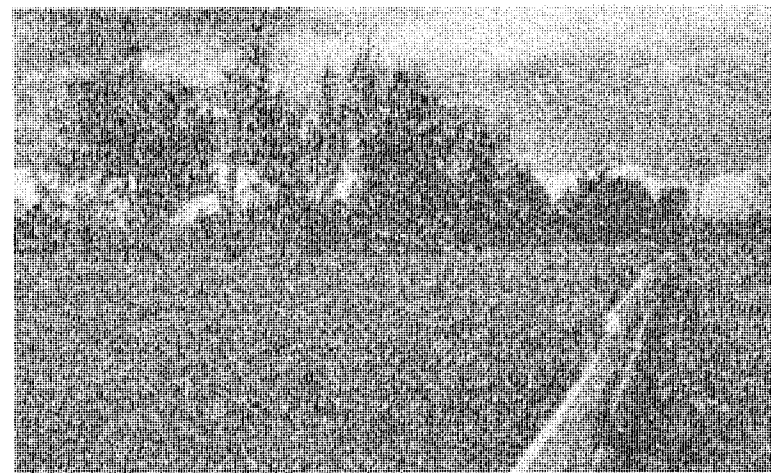
Important pedestrian views from the road pull-over above Waimea Bay, from the shoreline at Waimea Bay and from the coral formations at Pupukea Beach Park.

5.6 NORTH SHORE VIEWSHED

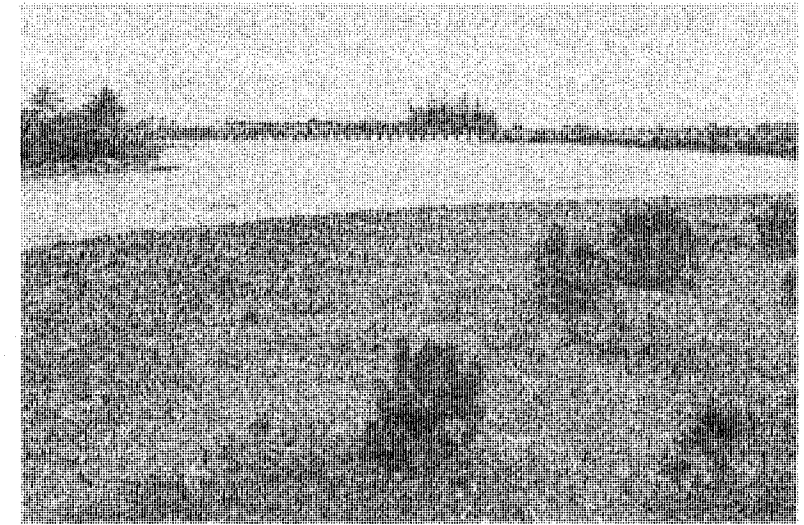
CONCERNS/CONSIDERATIONS

The Mokuleia area is unique in its visual qualities and sense of remoteness. The capacity of the Mokuleia area to assimilate any further urbanization while retaining its visual integrity will be dependent upon de-emphasizing building prominence in favor of visual compatibility. The apartment buildings of Crozier Drive may be considered a "worst case" example of visual encroachment along the Mokuleia shoreline.

Several sections of the shoreline frontage along Farrington Highway within the Kaena section are shielded from view by vegetation which with some selective clearing, could provide additional openings for shoreline views with minimal disturbance to the intact quality of the area.



5.14 Polo fields at Mokuleia



5.15 Makai view of Paukauila Stream



5.16 Coastal land form with building encroachment as seen from Waimea Bay

The agricultural areas fronting Kaiaka Bay on the south and west sides possess an unusual opportunity to open up a significant new viewing areas. The bay only recently came into prominence as a scenic resource with the development of the Kaiaka State Recreational Park on the Haleiwa side of the bay. The new park provides dramatic lateral views along the shoreline and of the Waianae Mountains in the distance.

The agricultural designated lands which fall within the dominant viewing corridor from Kaiaka State Recreational Park are classified State Urban. Any future development of this area should recognize two important view objectives. The first is to respect the unity of the view from Kaiaka Park towards the Waianae Mountains. The second objective is to provide public viewing areas of the bay and Kaiaka State Recreational Park while retaining the same visual quality of unity through appropriate site design.

The viewing attributes of Haleiwa Harbor are to some degree compromised by the presence of structures within its viewing sphere from the coastal highway. Both structures fall under State jurisdiction; one of which, the Surf and Sea Gallery, while not on the Historic Register, is of historical interest. The other structure is the Harbor Masters Building within the Harbor. The scale of the latter building disrupts the overall encompassing view of the harbor while the former building breaks a sweeping view of the ocean, the harbor, Anahulu Bridge and the backdrop of the Waianae Mountains. In the future, if alterations are entertained for either structure the off site view constraints should be evaluated.

Puaena Point which borders Haleiwa Beach Park has similar characteristics as the Kaiaka Bay area. This undeveloped area is designated Agriculture on the Development Plan but classified State Urban. This is a very prominent land mark which has extensive implications upon view responses to and from Puaena Point. It is a very dramatic location within Waialua Bay but the viewing qualities of the site are unknown to the public because of its isolation. Any future development of the site will require a careful examination of the visual experiences to be retained and reinforced.

Waimea Bay as noted earlier is a scenic resource unto itself. It is a view object within its own viewing areas. To retain the striking beauty of the bay and its visual unity it is essential to prevent the introduction of any structure which because of size, placement or selection of building materials or color would catch the attention of the viewer. Of primary importance in this setting is to prohibit structures from piercing the skyline of the surrounding bluffs.

Pupukea Beach Park has vivid viewing qualities. The coastal highway and the adjacent park areas have made this picturesque coastline available to all types of viewers. The major requirement in retaining this striking coastline area is to prevent the placement of any more structures on the makai side of Kamehameha Highway. If any existing structures are to be replaced, siting and design are the key ingredients for compatibility.

6. KOOLAULOA

- The Koolauloa area covers approximately 25 miles of coastline, from Kawela Bay to Kaoio Point. The area is distinguished by its rural character and unique coastal views made possible by the close alignment of Kamehameha Highway to the shoreline.
- DP statements regarding public views within Koolauloa are as follows:
- In order to protect and enhance the rural attractiveness of Koolauloa, views from public places of the lateral Koolau ridges and deep inland valleys of southern Koolauloa shall be protected wherever possible. Panoramic and continuous views from public places of the coast and the sea, as well views of the expansive Kahuku plains, shall be protected.
- The subordinate role of the built environment with respect to the natural environment and agricultural activities shall be emphasized by the identification and protection of panoramic public views of the shore, stream, mountains and agricultural fields.
- Kamehameha Highway provides the traveler with an exceptional scenic experience. Development adjacent to the highway shall reflect the need to preserve the current panoramic roadway views of the sea, the coastline, the Koolau Mountains and lateral ridges, inner valleys, and landmarks.
- Important views to be protected include, but are not limited to the following:
 - Panoramic mauka, makai, and coastal views from Laie Peninsula.
 - Panoramic view from Punaluu Beach.
 - Panoramic mauka and makai views from Kahana Bay.
 - Makai views from Mahie Point.
 - Coastal views from Swazy Beach.
 - Mauka and makai views from Kaaawa Beach.
 - Views of the Crouching Lion rock formation from Kamehameha Highway.

This area is studied according to its four viewsheds:

- A. Kawela Bay Viewshed
- B. Kuilima Viewshed
- C. Kahuku Viewshed
- D. Laie/Kaaawa Viewshed

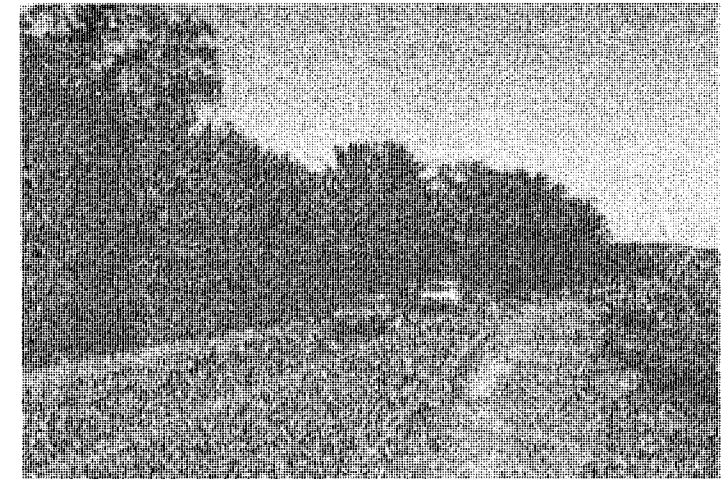
6.1 KAWELA BAY VIEWSHED

The Kawela Bay Viewshed consist of a relatively small crescent shaped bay at the northern end of the Koolauloa district. The beach frontage is fully developed with residential lots and thick roadside vegetation prevents any views into the bay from Kamehameha Highway.

DP land use maps indicate portions of the viewshed being developed for resort uses. This development may begin to open up public views of the bay which is currently limited to the pedestrian at the shoreline.

6.2 KUILIMA VIEWSHED

The Kuilima Viewshed is also a small bay, adjacent to Kawela Bay. The surrounding land uses include the existing Kuilima Bay. The surrounding land uses include the existing Kuilima Resort development. Unlike Kawela, the distance between the shoreline and the coastal highway is over 2000 feet making views of the ocean, from the highway, too far to be of significance. Roadway views instead focus on the landscape frontage of the project and include deep views into the golf course which fronts Kamehameha Highway. Buildings are set off in the distance and the open space on both the mauka and makai sides of the highway are generous.



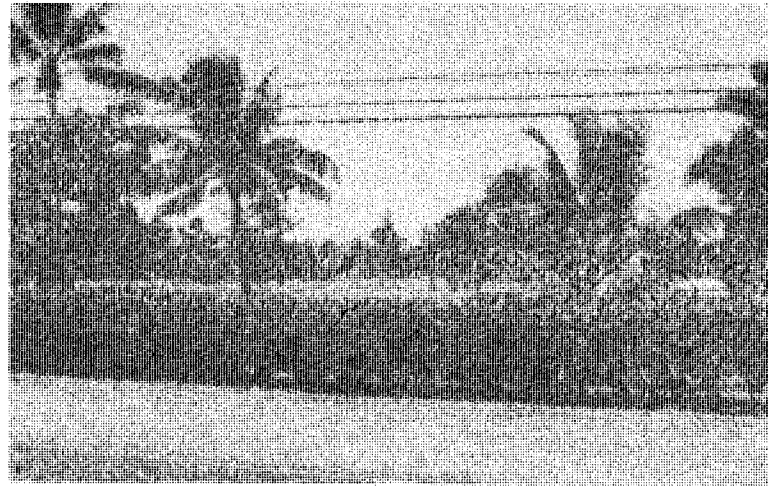
6.1 Roadside vegetation along Kamehameha Highway, Kawela Bay



6.2 View across Turtle Bay from Kuilima Resort



6.3 View of the coastal highway at Kuilima Resort



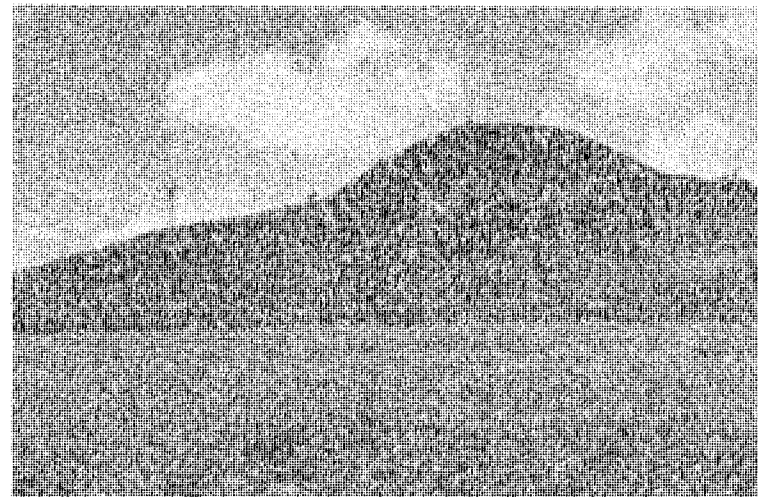
6.4 View of hedges and golf course from the coastal highway

The proposed expansion of the Kuilima Resort area incorporates several elements which address the protection and enhancement of the shoreline scenic resources. A one hundred foot wide shoreline easement for use by the general public will be established. This easement will be clear of structures and linked to public parks and pedestrian way easements. Additionally, building setbacks from the shoreline, land coverage ratios and building height limits have been adopted to control development within 300 feet of the shoreline. The proposed expansion includes an new internal roadway paralleling the ocean which will provide the opportunity for new coastal views. Another important aspect of the Kuilima Resort development program is the inclusion of a View Corridor Plan in the SMA permit. This plan can serve as the basis to maximize scenic resources within the project area.

Significant Roadway Views

KL-1

Continuous views (mauka and makai) into resort golf course and other agricultural lands.



6.5 Kahuku plains, mauka

6.3 KAHUKU VIEWSHED

The Kahuku Viewshed includes the northern most area of Oahu, from Kahuku Point to Laie Point and is a transitional zone between the North Shore and the windward coast. This viewshed contains the vast agricultural lands in the Kahuku area, Kahuku Town and the rural community at Malaekahana.

Significant roadway views include the agricultural lands which are on both the mauka and makai sides of the highway. Other significant open spaces are the Kahuku Golf Course and Adams Field, neither of which are visible from the coastal highway.

The Kahuku Viewshed is studied according to the following sections:

Section A, Kahuku
Section B, Malaekahana

6.3.1 SECTION A OF THE KAHUKU VIEWSHED, KAHUKU

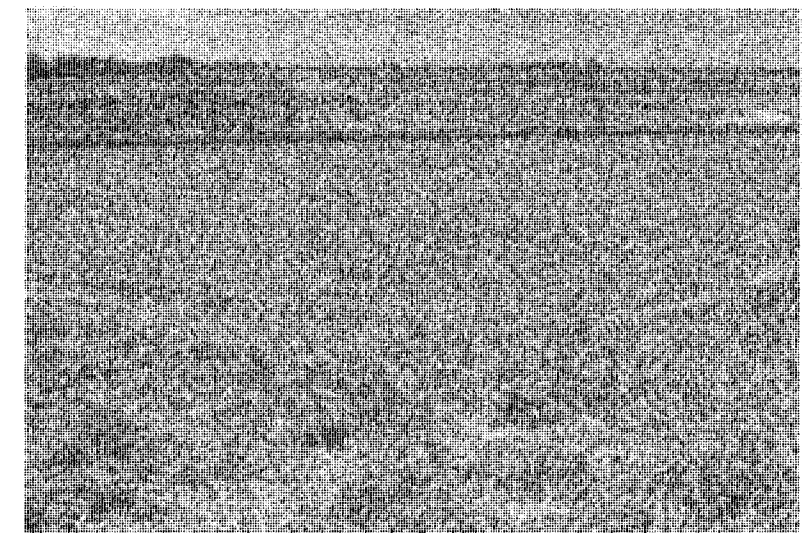
The visual quality of this section is based primarily on the visual intactness of the agricultural land and open spaces surrounding the coastal highway. The coastal highway at Kahuku moves significantly inland from the shoreline. In one section, the highway is over one mile from the ocean.

The Kahuku Viewshed does not contain any dominant land forms but the existing sand dunes which characterize the view along the beach add interest in this relatively flat terrain because of their extensiveness and undulating character.

Significant Roadway Views

KL-1

A significant stretch of highway providing views (mauka and makai) into agricultural lands and the open space at Kuilima. While no views of the ocean are visible, views of the open space is an important character to the viewshed.



6.6 Kahuku plains, makai

**6.3.2 SECTION B OF THE KAHUKU VIEWSHED,
MALAEKAHANA**

This section consist of the rural community at Malaekahana, and the Malaekahana State Park.

Makai views from the coastal highway are very limited due to thick vegetation and earth mounds that block out most coastal viewing opportunities. This natural vegetation and the agricultural land uses however are important elements in retaining the rural character of the area.

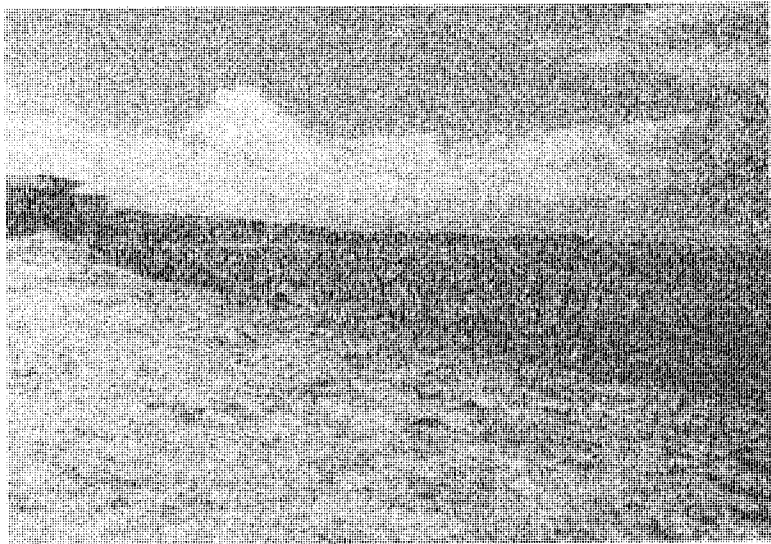
Important stationary views from the shoreline at Malaekahana Park and Huikilau Park are exceptional, providing vivid scenery of Laie Bay, Mukuauia Island, and Laie Peninsula. Even with the encroachment of a few residential structures long the shoreline and at Laie Peninsula, the pedestrian views appear vivid and unified. The visual isolation from the highway is a positive factor in enjoying this portion of the viewshed.

Significant Roadway Views

KL-2
Intermittent views consist of open space/important landscape, view corridors at Hukilau Park.

Significant Stationary Views

Views from Malaekahana State Park, Hukilau Park.



6.7 View across Laie Bay from Laie Point



6.8 Rock formations at Laie Point

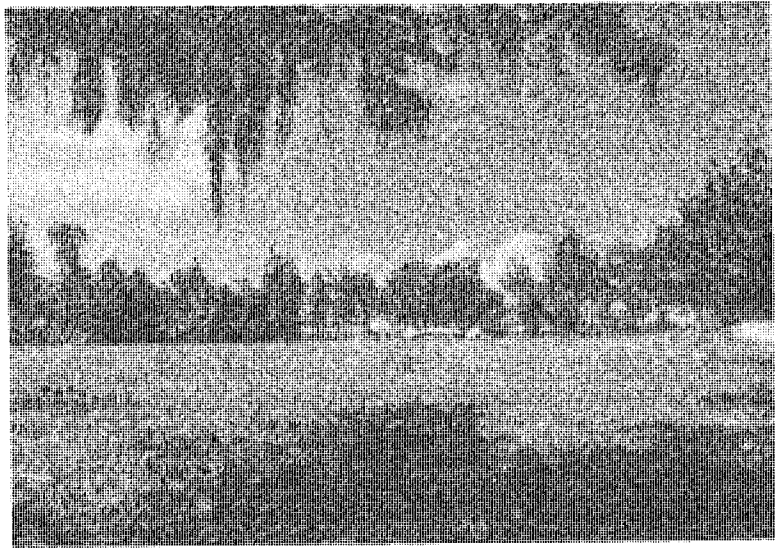
6.4 LAIE/KAAAWA VIEWSHED

The Laie/Kaaawa Viewshed includes the area between Laie Point and Kaoio Point. Included in this viewshed are the rural communities of Laie, Hauula, Punaluu, Kahana and Kaaawa. The shoreline is composed of a series of shallow undulations, and is often free of developments makai of the highway. Many continuous and intermittent views are linked together to create a contiguous and picturesque driving experience from Laie Point to Kaoio Point in Kaaawa.

The SMA boundary is mauka of Kamehameha Highway and varies in depth to include most developed land and the entire Kahana Valley.

The Laie/Kaaawa Viewshed is categorized into three distinct sections:

- Section A, Hauula
- Section B, Kahana
- Section C, Kaaawa



6.9 Malaekahana State Park

6.4.1 SECTION A OF THE LAIE/KAAAWA VIEWSHED, HAUULA

Section A is from Laie Point to the beginning of Kahana Bay, just past Makalii Point. This section includes the rural residential communities of Hauula and Punaluu. It is a series of continuous and intermittent views linked in quick succession. Approximately 50% of the coastal highway is free of makai developments. The balance, except for Pat's at Punaluu, contains residential lots, usually one lot deep and clustered into short segments along the highway.

Based on its rural character and several stretches of continuous views from the highway, unity and a sense of rural intactness are the primary visual attributes of this area. These attributes are further enhanced by the shallow serpentine shape of the coastline and highway. This undulation allows lateral views of the shoreline when traveling in either direction on Kamehameha Highway.

Stationary views are available from all beach parks and also provide exceptional lateral coastal views due to the undulation form of the coastline. The stationary views from Laie Peninsula provide an unusual opportunity for capturing the visual qualities of the entire viewshed.

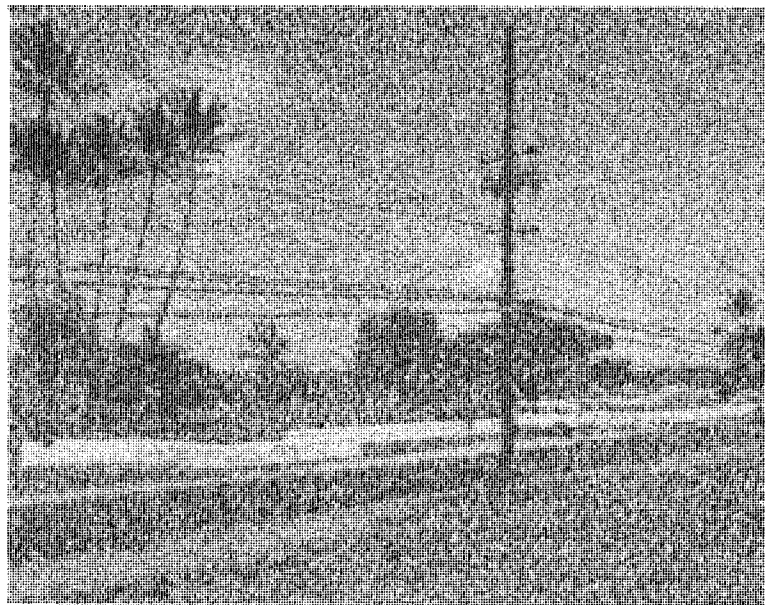
Significant Views

KL-3

Linkage of continuous and intermittent coastal views along entire length of coastal highway.

Significant Stationary Views

Pedestrian views from Hauula and Punaluu Beach Parks.



6.10 The coastal highway fronting Hauula Beach Park

6.4.2 SECTION B OF THE LAIE/KAAAWA VIEWSHED, KAHANA BAY

Section B consist of Kahana Bay. Viewing distance across the mouth of the bay is approximately 3/4 miles. Similar to Waimea Bay, Kahana Bay is both a view object and a viewing point within the bay itself. The bay also includes Huilua Fishpond which is on the Nation Register of Historic Places. The visual quality of this bay consist of its intact state and vivid scenery. It is a unique environment that should remain protected from any form of encroachment.

Significant Roadway and Stationary Views

KL-4

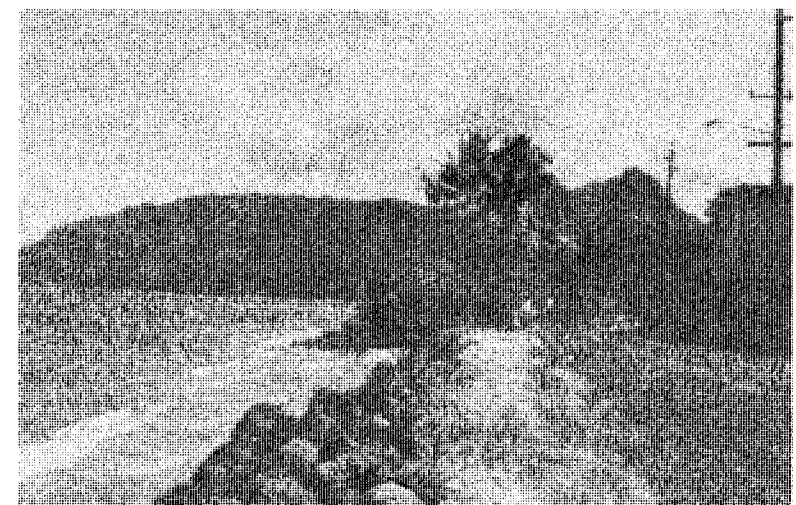
All makai and lateral views from the coastal highway looking into Kahana Bay are significant as well as views of Kahana Stream and Huilua Fishpond from the highway.



6.11 Intermittent view from the coastal highway at Punaluu



6.12 Parking lot at Pounders Beach



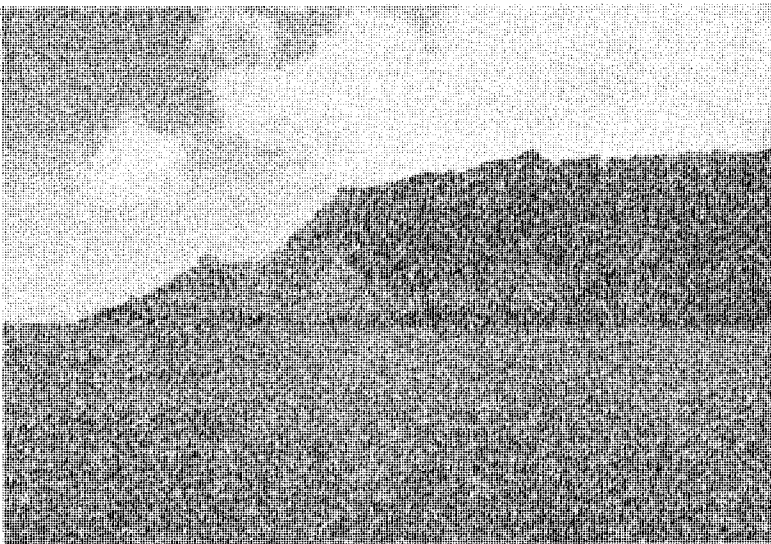
6.13 Continuous view from the coastal highway looking towards Punaluu

**6.4.3 SECTION C OF THE LAIE/KAAAWA VIEWSHED,
KAAAWA**

Section C ranges from Kahana Bay to Kaoio Point. It consist of approximately 3 miles of shoreline and includes the entire Kaaawa area. Except for a small cluster of makai residential lots, the entire section provides unobstructed coastal views from the highway.

The coastal highway follows the shoreline with most residential land use located on the mauka side of the road. The SMA boundary lies mauka of the highway and includes most developed land.

Visual quality from the coastal highway is based primarily on its rural intactness and vivid lateral views from the coastal highway.



6.14 View across Kahana Bay

Significant Roadway Views

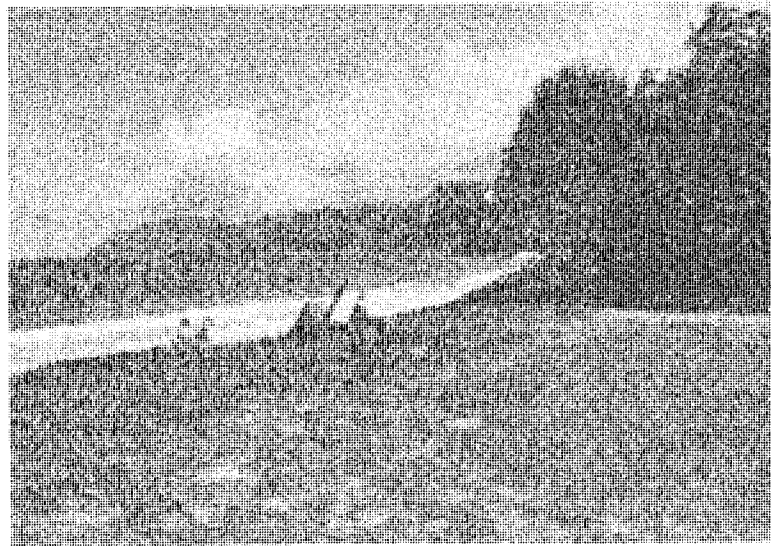
KL-5
Linkage of continuous and intermittent roadway views from Kamehameha Highway along the entire stretch of the Kaaawa section.

Significant Stationary Views

Important pedestrian views from Swanzy Beach Park, Kaaawa Beach and Mahie Point.



6.15 View of the coastal highway in Kaaawa



6.16 View across the Laie/Kaaawa Viewshed from Pounders Beach

6.5 KOOLAULOA VIEW CONCERNS/OPPORTUNITIES

The prominence of the natural environment, curvilinear shoreline and the presence of several continuous roadway views are primary contributing factors to the rural character and visual quality of Koolauloa. DP statements regarding public views emphasize the subordinate role of the built environment in favor of retaining coastal views and the rural atmosphere.

Critical to all viewsheds within the Koolauloa district is the overall driving experience along the coastal highway. Existing view openings, land uses and roadside vegetation provide a cohesive experience which is the essence of the coastal experience in Koolauloa. Although walls and fences may be necessary for privacy and noise control, efforts should be made to avoid the "corridor" effect along the coastal highway. Public beach parks which currently provide views across the site should be carefully maintained to avoid unnecessary landscape screening or the placement of park structures within the view corridor.

Opportunities to improve the viewshed are presented in the Kuilima resort expansion plans between Kawela Bay and Kahuku Point where improved shoreline access should provide new opportunities for public scenic resource enjoyment.

7. KOOLAUPOKO

The Koolaupoko area covers approximately 30 miles of Windward coastline from Kaoio Point to Makapuu Point. The Special Provisions for the Koolaupoko Development Plan identifies the following open space areas and public views:

Open Space Areas

Koolau ridges, Kawainui Marsh, Mokolii Island, Mount Olomana, Heeia Fishpond, Molii Pond, Puu O Kona, Puu Lanipo, Makapuu Point, Kahaluu Fishpond (Kahouna), Puu O Hule Hule, Puu O Ehu, and Kaiwa Ridge.

Public Views

- Continuous ocean views from Kalaniana'ole Highway.
- Panoramic views of the Koolau mountains through Waimanalo.
- Makai views from Kamehameha Highway from Lae Okealohi to Kahouna Fishpond.
- Makai views from Ahuimanu Road.
- Mauka views from Kuulei Road.
- Panoramic views of the Pali and views of Puu O Ehu ridge and Olomana from Kaelepulu Pond area.
- Views of Olomana from Keolu Hills Playground and Kalaniana'ole Highway, from Waimanalo and from the Pali Highway.
- Views of Kaneohe Bay from Kaneohe Bay Drive and Kahekili Highway.
- Views of Kaelepulu Pond (Enchanted Lake) from Kalaniana'ole Highway.
- Panoramic views of Kailua and Kaneohe from the Likelike and Pali Highway.
- Pali views from Pali Highway.

Based on the configuration of its shoreline and land forms, three viewsheds can be distinguished which correspond to the three bays that comprise the Koolaupoko district. These viewsheds are:

Kaneohe Bay Viewshed
Kailua Bay Viewshed
Waimanalo Bay Viewshed

7.1 KANEOHE BAY VIEWSHED

This viewshed ranges from Kualoa Park to KMCAS. The viewing distance across this bay is approximately 7.75 miles. The primary physical characteristics of the viewshed are characterized by the steep cliffs and ridges extending from the Koolau Mountains, an undulating coastline, and an abundance of natural vegetation along the roadway. Due to the well defined configuration of Kaneohe Bay, primary views often include both the ocean and the land forms which act as a backdrop to the views.

The SMA boundary, within this Kaneohe Bay Viewshed generally follows the coastal highway (Kamehameha Highway) but departs to include some mauka sections of Kahaluu and the Heeia Meadowlands. Other important coastal roads include Lilipuna Road and Kaneohe Bay Drive. Although these roads follow the coastline, surprisingly few views can be found except from public parks and occasional glimpses through breaks in the vegetation. The most dramatic views of Kaneohe Bay occurs from the H-3 which falls outside of the SMA boundary. This view is an excellent example of the visual quality of unity. Other significant stationary viewing points include Kualoa Regional Park and Heeia State Park.

The Kaneohe Bay Viewshed is studied in 2 sections.

Section A, Kahaluu
Section B, Heeia

7.1.1 SECTION A OF THE KANEOHE BAY VIEWSHED, KAHALUU

This section ranges from Kaoio Point to Heeia, and includes Kualoa Regional Park, the Walahole/Waikane Valleys, Kahaluu, and portions of Ahuimanu. The Koolau Mountains, natural vegetation and the subordinate role of the built environment demonstrates rural intactness and visual unity.

Significant roadway views are found at the Kualoa Regional Park and near the Kahaluu Pond. Coastal roadway views near Kualoa Park are particularly significant, providing views of Mokolii, the shoreline and introduces the driver into the vast open space on both sides of the highway.

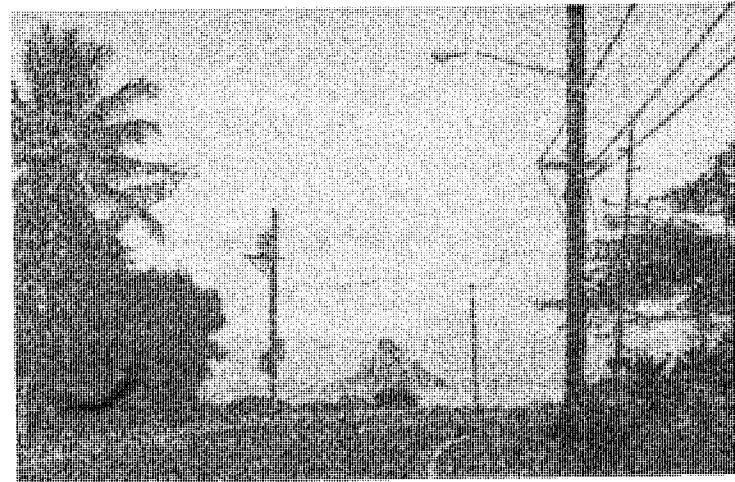
Other specific views of the ocean from the highway are very limited by the thick vegetation (both cultivated and natural) growing along the sides of the road. The visual experience however is unique and reflects the rural qualities that are associated with the Windward coast.

Significant Roadway Views

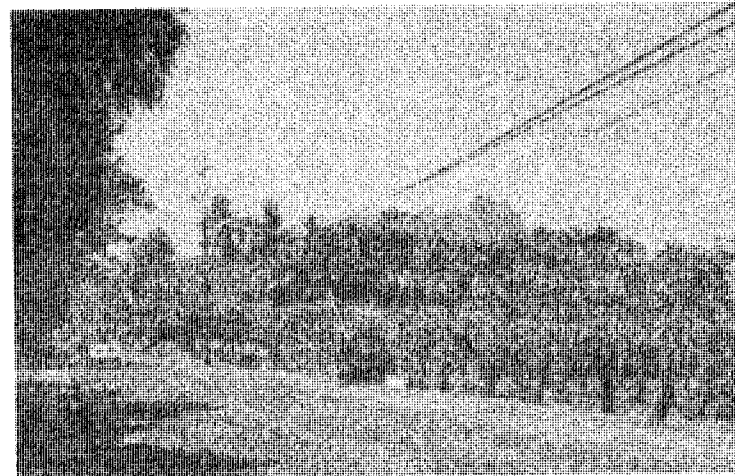
KP-1
Continuous views from Kaoio Point to Kualoa Park. This continuous view is both mauka and makai of the highway. Mauka views are across the open pastures of Kualoa Ranch and capture the very steep cliffs of the Koolau Mountains. The makai views are of Kualoa Park, the ocean and along the shoreline, and Mokolii Island. A series of residential lots along Kamehameha Highway encroach into the view. There are two significant breaks in this residential pattern that provide good views of the shoreline.



7.1 Pedestrian view of the Kaneohe Bay Viewshed as seen from Kualoa Park



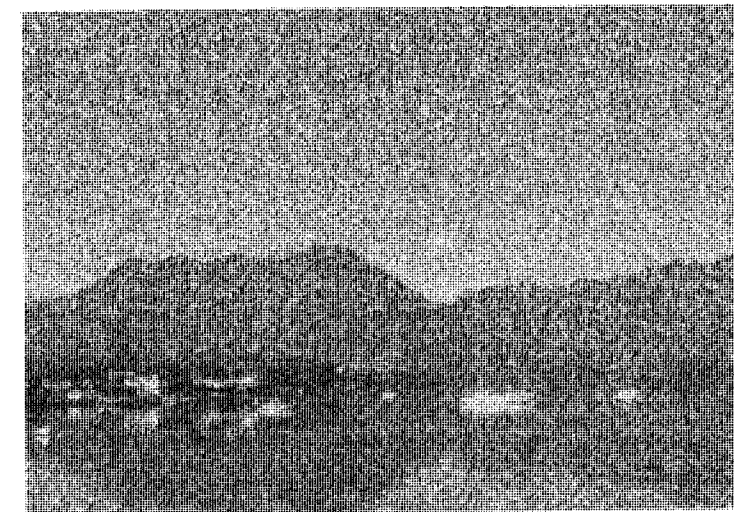
7.3 View of Mokoli'i Island from Kamehameha Highway near Kualoa Park



7.4 Agricultural crops and other roadside vegetation characterize the coastal highway in the Waiahole/Waikane area



7.5 Roadway views of Kaneohe Bay and the Heeia Boat Harbor from Kamehameha Highway



7.6 View of the Kaneohe Bay Viewshed from H-3

KP-2

Intermittent makai views from Kualoa Regional Park through the Waiahole/ Waikane area. The natural vegetation and agricultural crops are the primary elements that characterize the viewing experience.

KP-3

Intermittent makai views in the Kahaluu area with a significant view opening near the Kahaluu Fishpond. The immediate roadway environs along this stretch of the highway are more urban in characteristics and lack a recognition of the rural setting which prevails throughout this area.

KP-4

Intermittent makai views Kamehameha Highway. Views are across Kaneohe Bay towards Kaoio Point. View opening occurs between or over residential structure on downhill lots.

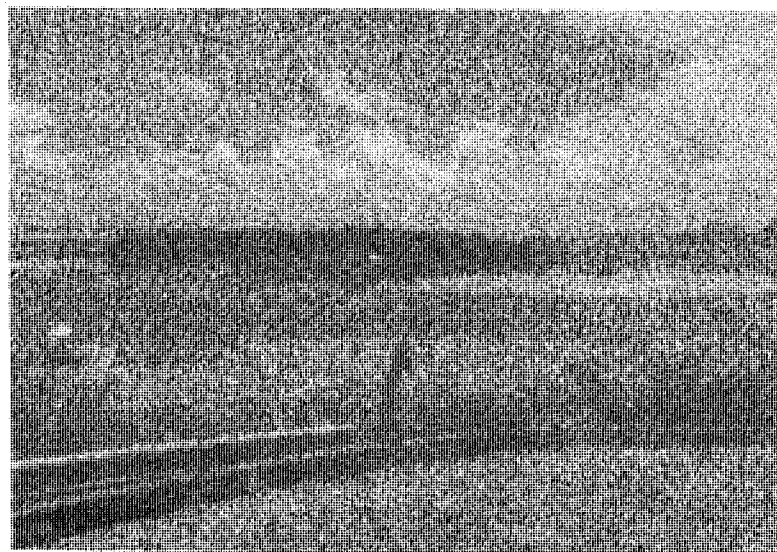
Significant Stationary Views

Pedestrian views from Kualoa Park provides the only significant stationary viewing points within the Kahaluu section.

7.1.2 SECTION B OF THE KANEOHE BAY VIEWSHED, HEEIA

This section of the viewshed ranges from Heeia to the entry of the Kaneohe Marine Corps Air Station (KMCAS). While within the same viewshed as the Kahaluu section, the visual character of Heeia is distinctly residential with single family homes lining most of the shoreline.

Two significant roadway views are located within this section, the first occurring along Kamehameha Highway near the Heeia Boat Harbor. The second roadway view occurs from a portion of the H-3 Freeway leading into KMCAS. This view is of particular significance because it provides lateral views across the bay, encompassing a scene of the entire viewshed.



7.7 Moku O Loe Island (Coconut Island) as seen from Lilipuna Road

Significant Roadway Views

KP-5

Continuous makai views from Heeia to Kealahi Point. Alignment of Kamehameha Highway adjacent to shoreline insures preservation of continuous views.

KP-6

Intermittent views (mauka and makai) from Kealahi Point to Heeia Fishpond. Heavy vegetation limits views in this area however viewing opportunities may be possible with selective clearing.

KP-7

Lilipuna Road opposite Coconut Island has some intermittent views of the Bay. The makai side of the road is developed with single-family homes but because of the sloping topography some views exist over and between houses.

KP-8

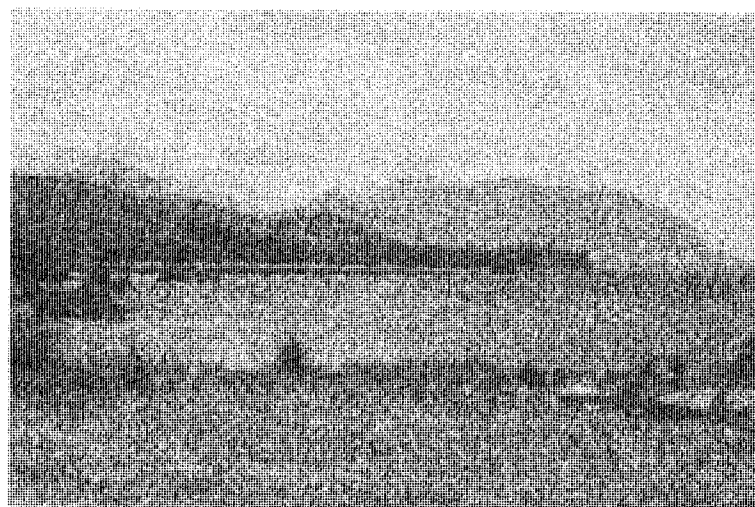
Intermittent makai views of Kaneohe Bay from Kaneohe Bay Drive and the H-3. Views from Kaneohe Bay Drive are very limited due to residential lots. Views from the H-3 are unobstructed due to its higher elevation and as noted earlier offers striking views of the bay.

Significant Stationary Views

Significant pedestrian viewing points include panoramic views from the Heeia State Park and the H-3 scenic lookout.



7.8 View across the Kaneohe Bay Viewshed as seen from Kealahi Point (Heeia State Park)



7.9 View from Lilipuna Road



7.10 Lateral view of the Kailua Bay Viewshed

7.2 KAILUA BAY VIEWSHED

This relatively small viewshed is bounded by Mokapu Point and Wailea Point, and contains the areas of Kailua and Lanikai. It is a shallow crescent shaped bay with an off shore island (Popoia Island). Viewing distance across this bay is approximately 3.5 miles. While pedestrian views are available from the shoreline, the entire coastline (with the exception of Kailua Beach Park) is tightly lined with existing residential homes, effectively eliminating public coastal views from the road.

The only significant roadway view occurs at Kailua Beach Park near Alala Point. This lateral coastal view is highly vivid and illustrates a unified visual composition between the viewshed and the predominant residential land uses that line the shoreline.

Included within the Kailua Bay Viewshed is the Kawainui Marsh area which falls within the SMA boundary. Two significant views are available from the highway into the marsh.

Significant Roadway Views

KP-9

Mauka and makai view corridors at Kawainui Canal.

KP-10

Lateral views into Kawainui Marsh from the highway

KP-11

Continuous and intermittent views from Kaelepulu Stream to Alala Point. Mauka views include Kaelepulu Stream and Mid Pacific Golf Course. Makai views include Kailua Beach Park, and Popoia Island.

Significant Stationary Views

Views from Kailua Beach Park provide the only significant coastal viewing point for the pedestrian.

7.3 WAIMANALO BAY VIEWSHED

This viewshed ranges from Wailea Point to Makapuu Point. Viewing distance across this bay is approximately 5.5 miles. The viewshed includes Bellows Air Force Base, Waimanalo, and the coastal drive around Makapuu. There are 6 coastal parks within the viewshed.

The visual characteristics of the viewshed include the vegetation changes from Ironwood forest to coastal scrub, a significant amount of parks and open space, and the Koolau Mountains with Olomana Peak as the most vivid landform in this viewshed. Geographically, Olomana does not fall within the Waimanalo Viewshed but because of its orientation with the Makapuu section of Kamehameha Highway, the peak, as viewed northward from the coastal highway is inseparable from the coastal setting.

The SMA boundary generally follows Kalanianaʻole Highway, and provides a series of coastal views as well as views of important roadside landscapes/open spaces.

The primary visual attributes of the Waimanalo Viewshed is its intactness and vividness, particularly between Makapuu Point and Kaiona Beach Park.

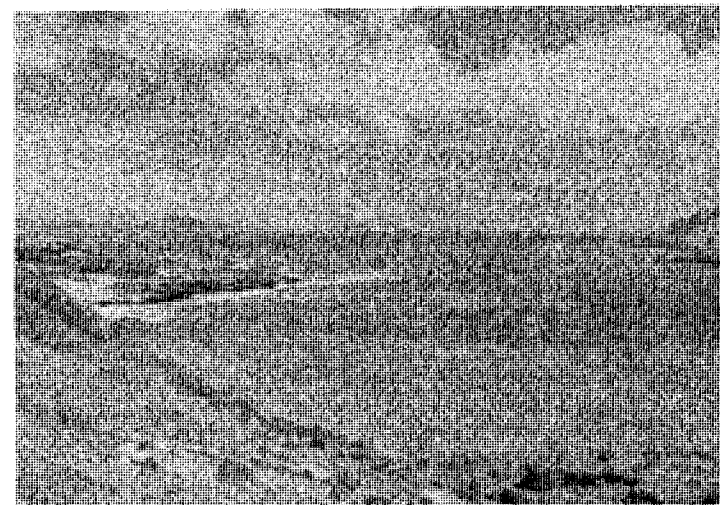
This viewshed is studied in two sections:

Section A, Waimanalo
Section B, Makapuu

7.3.1 SECTION A WAIMANALO BAY VIEWSHED, WAIMANALO

This section covers Wailea Point to Waimanalo State Park.

The coastal highway veers inland and roadway views are masked by thick stands of Ironwoods and other natural vegetation. Although this vegetation prevents views of the ocean, it is a major contributing factor to the rural character of Waimanalo and helps to relieve the "corridor" effect that occurs along certain portions of the highway.



7.11 View across Waimanalo Bay as seen from the Makapuu scenic lookout



7.12 Roadway view into Olomana Golf Course

Significant Roadway Views

KP-12

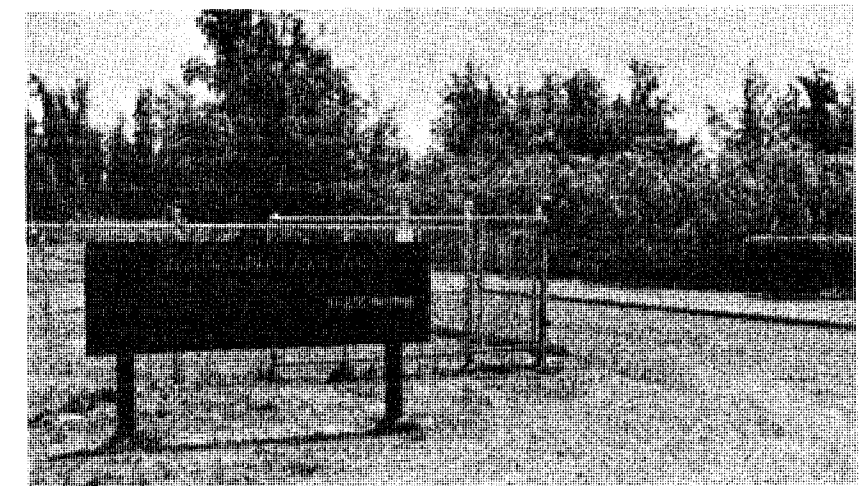
Continuous makai view from Kalanianaʻole Highway across Olomana Golf Course.

KP-13

Intermittent mauka and makai views of Ironwood forest at Bellows AFB and Waimanalo State Park. The shoreline is not visible from Kamehameha Highway in this section.

Significant Stationary Views

Stationary pedestrian views from within the Waimanalo State Park and at Bellows Beach Park are exceptionally vivid and intact. Manana Island, Mokapu Peninsula, Makapuu Point and Koolau Mountains are prominent land forms that can be seen from the shoreline. The physical separation between the coastal highway and these parks is an important feature to the viewing experience.



7.13 Ironwood forest along the coastal highway in Waimanalo

7.3.2 SECTION B OF THE WAIMANALO BAY VIEWSHED, MAKAPUU

This section ranges from Waimanalo State Park to Makapuu Point. Except for two clusters of residential lots along the makai side of the coastal highway, continuous roadway views are present throughout the section. Intactness and vividness are the primary visual attributes of the area. Its barren landscape and striking coastal forms provide unique viewing opportunities that are similar to those within the Koko Head Viewshed.

The Makapuu scenic lookout is the most significant stationary view within this section, providing vivid lateral views across the entire Waimanalo Bay Viewshed to Wailea Point.

Significant Roadway Views

KP-14

Essentially there are continuous mauka and makai views from Waimanalo Beach Park to Makapuu Point.

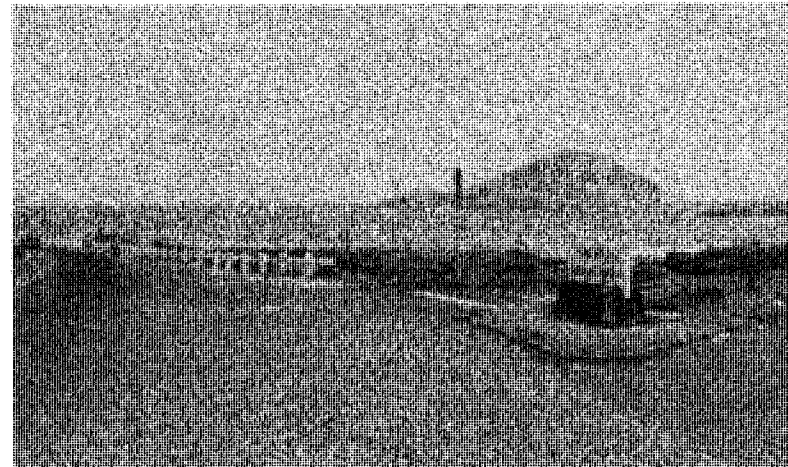


7.14 View from the coastal highway near Sea Life Park

This section of the Waiamanalo Bay Viewshed possesses some of the most distinctive views within Koolaupoko. The view northward from Makapuu Lookout is extraordinary in its all encompassing visual qualities of vividness, intactness and unity.

Significant Stationary Views

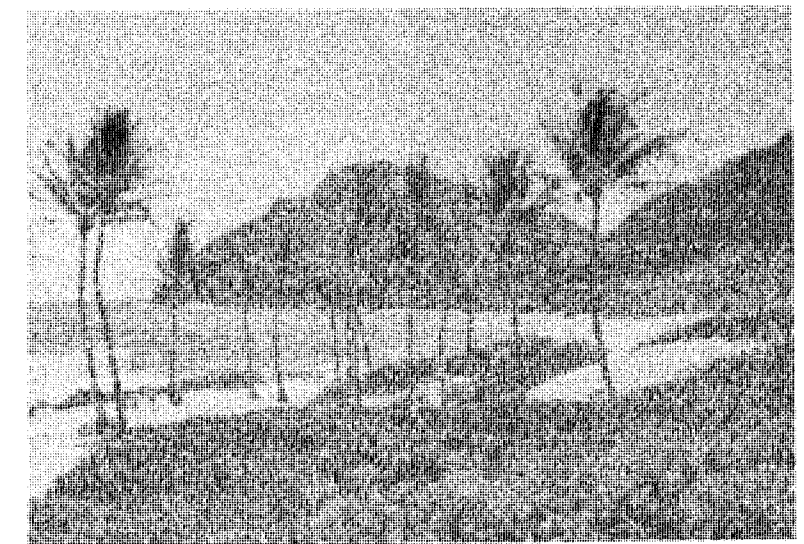
Significant pedestrian views are from Makapuu scenic lookout and from the shoreline at Waimanalo Beach Park, Waimanalo State Park and Bellows Field Beach Park.



7.15 Roadway view of Manana Island (Rabbit Island) near Makapuu Beach Park



7.16 Views of the ocean and the Koolau Mountains in Waimanalo



7.17 Makapuu Beach Park and Makapuu Head

7.4 KOOLAUPOKO VIEWSHED CONCERNS/OPPORTUNITIES

Koolaupoko presents an impressive array of scenic resources.

The coastal views are in many instances reinforced by the ever present backdrop of the Koolau Mountain Range and the climatic conditions which foster an abundance of natural vegetation along the highway.

The Koolau Mountains are equally dramatic because of their ridgeline variations and pali formations. Within the Kaneohe Bay Viewshed there are several situations to be noted. The residential development adjacent to Kualoa Park interrupts an otherwise sweeping view of the coastline approaching from the north and the introduction of the ocean and the shoreline when approaching from the south. There is very little that can be done other than recognizing this blockage in the event redevelopment occurs on the residential properties.

The section between Kualoa Park and Waiahole/Waikane is unique with its lush tropical vegetation which envelopes the coastal highway. Although views to the ocean are screened by this growth, it represents the only coastal highway on Oahu that captures this unusual driving experience. Based on its singular beauty and unique setting, penetration through this vegetated screen for the sake of coastal views, is questionable. The Moli Fishpond which is on the National Register of Historic Places and lies behind the vegetation, could be viewed from the highway at the Kualoa Park end of the pond, leaving the driving experience intact.

In Waiahole, where the coastal highway abuts the shoreline, the vegetation in this area should be cleared to permit a view of the bay and Mokoli'i Island.

The coastal highway frontage in Kahaluu does not provide any views to the magnificent bay which it borders neither does the existing development along the highway reflect the rural setting in which it is placed. The absence of any coherent design values along the highway diminishes the overall scenic qualities of this area.

Views to the historic Kahaluu Pond and the bay should be expanded and the design of buildings should reflect the rural attributes of the area.

View channels from Kamehameha Highway may be possible at the bridge separating Heeia Fishpond and Heeia Meadows. Such view corridors may be possible without diminishing the special character of the mangrove vegetation.

Existing views from the H-3 should be protected from any building encroachment along Kaneohe Bay Drive.

The Waimanalo Bay Viewshed section between Waimanalo Beach Park and Makapuu Point in some respects encompasses traits similar to the Makua Viewshed in Waianae or the Koko Head Viewshed in East Honolulu. The coastal highway bordered by its dry landscape is positioned between the ocean and the sharply descending mountains. The placement of any fu-

ture buildings on either side of the highway should require careful siting so as not to infringe upon the natural features or lateral viewing experience of this area. Of equal importance throughout the Waimanalo Bay Viewshed is the retention of Olomana Peak as viewed from the Coastal Highway and a concerted effort to minimize the "corridor" effect that is beginning to take place along certain sections of the highway near Waimanalo Town.

Utility lines should be placed underground and highway signage should be minimized and located to avoid interfering with the line of sight or creating distractions within the viewplanes.

8. EAST HONOLULU

The East Honolulu area consist of a series of valleys, ridgetops and coastal residential communities. The Koolau Mountains and its descending ridges, Koko Head and Koko Crater, and the unique coastal environment at the eastern extremity provides the area with a rich variety of land forms and viewing opportunities.

The Development Plan text regarding public views state:

- In order to promote pleasing and attractive living environments and panoramic mauka and makai views from public places, views of major landmarks from public places shall be protected whenever possible.
- Important views include, but are not limited to panoramic views of Koko Head, Kuapa Pond, Maunalua Bay from Keahole Street, Hawaii Kai Drive, and Kalanianaʻole Highway.

The East Honolulu area contains two major viewshed:

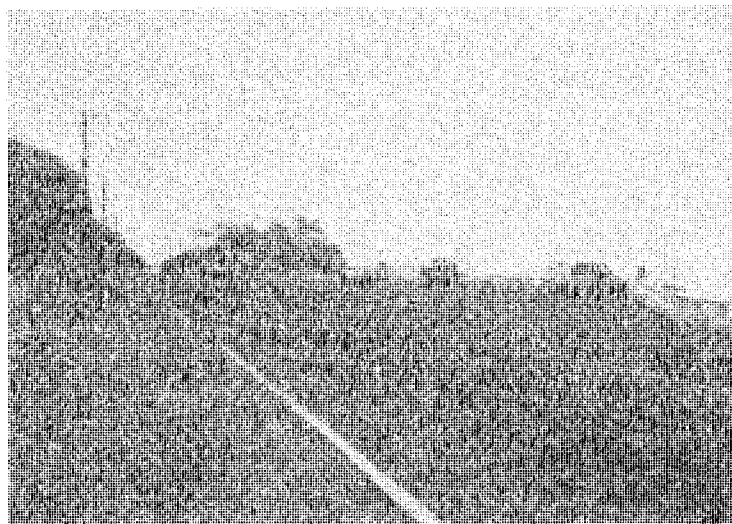
Maunalua Bay Viewshed
Koko Head Viewshed

8.1 MAUNALUA BAY VIEWSHED

The Maunalua Bay Viewshed contains approximately nine miles of coastline, ranging from Diamond Head to Kawaihoa Point at Portlock. The area is primarily residential in character and coastal views are limited to quick glimpses across a few coastal parks, at scenic lookout points or where the highway rises to climb over the Koko Head land form. The SMA boundary generally follows Kahala Avenue, portions of the H-1 Freeway and Kalanianole Highway.

The Maunalua Bay Viewshed is studied in three sections:

Section A, Kahala
Section B, Maunalua Bay
Section C, Hawaii Kai



8.1 The barren landscape characterizes the coastal roadway near the Diamond Head lookouts

8.1.1 SECTION A OF THE MAUNALUA BAY VIEWSHED, KAHALA

The Kahala section ranges from the Diamond Head lookouts to the Waialae Golf Course. Diamond Head Crater is a prominent landmark and is protected by the Diamond Head Special District. This district extends beyond the base of the crater to include substantial portions of Kapahulu and Kahala. Specific building height controls are set forth to protect the visibility of this famous landmark.

Diamond Head, in its natural state, is in sharp visual contrast to the lowrise residential developments and accompanying ornamental landscaping that surrounds its base.



8.2 Lush tropical plantings along Kahala Avenue contrast the natural landscape at Diamond Head

Coastal views from the road are limited to the Diamond Head lookout area where lateral views towards the east have long been noted for its spectacular scenic quality. Beyond the lookouts, no specific coastal views are present due to the established residential community. However the well developed tropical landscaping that flank Kahala Avenue are exceptional and add visual contrast to the dry coastal vegetation at the Diamond Head area.

Significant Road Views

EH-1

Continuous makai views from Diamond Head Road in the area of the Diamond Head lookouts. Views are from an elevated position spanning across the shoreline of the entire viewshed.

Significant Stationary Views

Significant stationary views are from the Diamond Head scenic lookouts, and the shoreline at Waialae Beach Park.

**8.1.2 SECTION B OF THE MAUNALUA BAY VIEWSHED,
MAUNALUA BAY**

The Maunalua Bay section ranges from the Waiālae Golf Course to the bridge entering Hawaii Kai. The area is highly developed with residential lots for the entire makai length of Kalanianaʻole Highway and the sense of shoreline or coastal views from the highway do not exist except for two short view corridors occurring at Wailupe and Kawaikui Beach Parks.

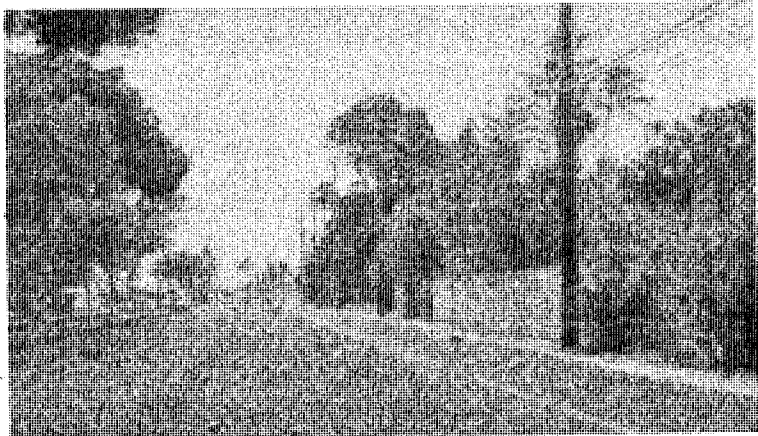
Views however from the residential developments on the ridges, such as Hawaii Loa and Waiālae Iki, are spectacular and the beauty of the Maunalua Bay Viewshed is best appreciated from these elevations.

Due to the heavy traffic along Kalanianaʻole Highway, walls at front property lines are a common theme, creating a "corridor" effect along the highway. Landscape plantings, median strip plantings and several open spaces (parks, Kalani High School and the Waiālae Golf Course) help to soften this effect and provide a moderate sense of visual unity to the corridor.

While not visible from the coastal roadway, the Paiko Peninsula area provides high quality stationary views of the viewshed and is a unique environment. It is also a significant view object from the ridge top residences of Hawaii Loa Ridge and Maunalua Bay Park.

Significant Roadway Views

EH-2
A view corridor at Wailupe Beach Park provides an unobstructed view across the park frontage.



8.3 Front yard walls and fence along the coastal highway are softened with landscape plantings

EH-3
A similar view corridor exists across Kawaikui Beach Park. Views are partially obscured due to a rock wall frontage and landscape plantings.

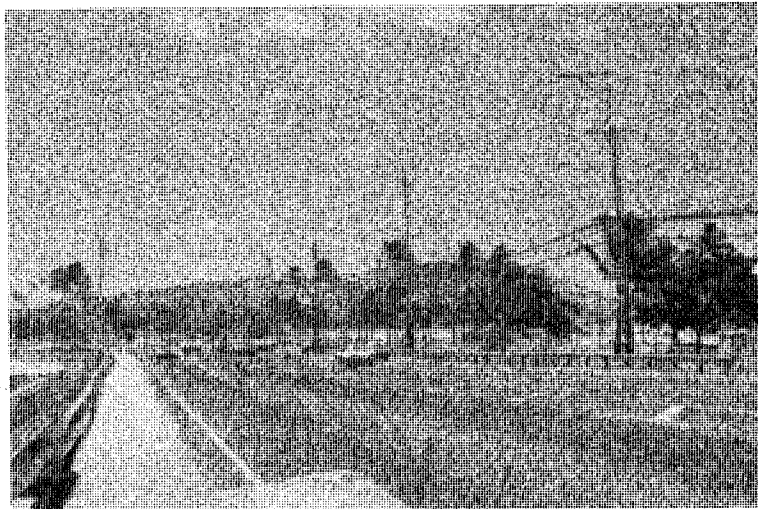
Significant Stationary Views

Stationary views include those seen from the beach parks mentioned (EH-2 and EH-3) and from Paiko Peninsula.

**8.1.3 SECTION C OF THE MAUNALUA BAY VIEWSHED,
HAWAII KAI**

The Hawaii Kai section includes the area just past Kuliouou to Portlock (Kawaihoa Point). In contrast to the scarcity of views in the Maunalua Bay section, visual resources in the Hawaii Kai section are abundant. Both mauka and makai views are continuous and of high visual quality. Contributing to this quality are strong images of the Koolau Mountains and inland waterways in the mauka direction, the Koko Head and Koko Crater land forms as seen driving in an easterly direction, and the unobstructed ocean views across Maunalua Bay Beach Park.

Relative to its suburban setting, the quality of visual unity between the natural and built environment is another strong attribute of this section of the viewshed.



8.4 Beginning of a continuous roadway view in Hawaii Kai



8.5 View across the Maunalua Bay Viewshed

Significant Roadway Views

EH-4
Continuous coastal views along Kalanianaʻole Highway from the bridge entering Hawaii Kai to the eastern end of Maunalua Bay Beach Park. Views are both mauka and makai, with a westerly view being of particular significance because it provides a lateral view of the entire viewshed.

Significant Stationary Views

Important stationary views are from the shoreline of Maunalua Bay Beach Park and from the scenic lookout off Kalanianaʻole Highway near the Hanauma Bay entry.

8.2 KOKO HEAD VIEWSHED

The Koko Head Viewshed begins at the top of Koko Head (Hanauma Bay) and extends through the Sandy Beach area to Makapuu Point. This section has long been recognized for its unique visual and environmental qualities. The serpentine roadway provides an inspiring sequence of viewing angles, capturing the jutting rock formations set in sharp contrast to the turbulent sea. The barren landscape, wind carved cliffs, the imposing coastal land forms of Makapuu Head, Koko Head Crater and Halona Point, and the long beach frontage at Sandy Beach are primary elements of this visual experience.

The vivid and intact qualities are unquestionable visual attributes of this area.

Significant Roadway Views

EH-5

Continuous views along Kalanianaʻole Highway from Koko Head to Makapuu Point. This roadway view is the crescendo of a continuous visual sequence covering the areas between Hawaii Kai in East Honolulu to the Waimanalo area in Koolāupoko.

Significant Stationary Views

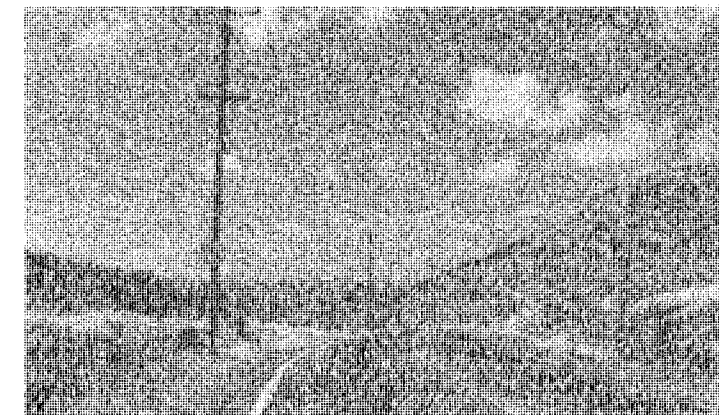
Views from all scenic lookouts along Kalanianaʻole Highway (Halona Point and the Molokai and Lanai lookouts).
Views from the shoreline and Sandy Beach Park.



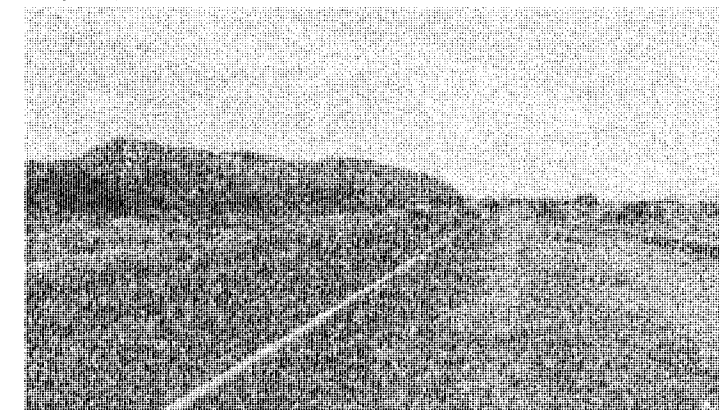
8.6 Striking rock formations along the coastal highway within the Koko Head Viewshed

8.3 EAST HONOLULU VIEW CONCERNS/OPPORTUNITIES

Within the Kahala and Maunaloa Bay sections of the Maunaloa Bay Viewshed, there are very few opportunities to create new view corridors to the shoreline. Development along the makai side of Kahala Avenue and Kalanianaʻole Highway is heavily walled or landscaped to screen out the traffic noise and to create privacy for the adjoining residences. Much of the properties are of such depth that redevelopment may still not provide coastal roadway views of any great significance. The emphasis seems better placed on maintaining the landscape and residential character through street trees and private landscaped frontages along this highly traveled corridor. The existing views and open spaces along Kalanianaʻole Highway consist of public parks. It is of fundamental importance that any modifications in such areas recognize the importance of keeping these areas free of structures and landscape screening.



8.7 View corridor across Queen's Beach from the Makapuu lookout



8.8 Dry coastal vegetation characterizes the environment along the coastal highway near Sandy Beach

The Koko Head Viewshed is a unique environment. Maintaining the visual integrity of this coastal area should be a high priority due to its intact visual qualities. Any modification to this coastal region should be scrutinized to insure the distinctive qualities of the viewshed are not marred.

The essential ingredients for protecting the visual quality is the maintenance of a low profile that does not exceed the ridgeline of the coastal land forms nor disrupt their natural shapes or the barrenness of the natural landscape. This recommendation applies not only to private development but also to public park structures and landscaping efforts, street signs and utilities.

9. PRIMARY URBAN CENTER

The PUC is contained within the South Shore Viewshed. It is the most urbanized area on Oahu and visual quality is determined relative to this urban character. Coastal views and the built environment merge into a single "cityscape" scene with visual distinction of subdistricts based primarily on urban form.

The PUC is studied according to four sections within the South Shore Viewshed.

- Section A, Pearl Harbor
- Section B, Keehi Lagoon
- Section C, Downtown
- Section D, Ala Moana

9.1.1 SECTION A OF THE SOUTH SHORE VIEWSHED, PEARL HARBOR

The Pearl Harbor section consists of the area surrounding Pearl Harbor, including Waipahu, Pearl City and Allamano.

The flat terrain and the built up military facilities surrounding Pearl Harbor provide very little public viewing opportunities into this bay. The best views of the bay are from the upper residential areas of Pearl City and Waipio where an overview of the harbor can be seen.

Even within its urban context, the development along the coastal roadways (Farrington Highway and Kamehameha Highway) are fairly jumbled, representing low visual unity and urban intactness.

Significant Roadway Views

- PUC-1
Makai view into Pearl Harbor from Kamehameha Highway at Pearl Harbor Park.
- PUC-2
Makai view into Pearl Harbor from Kamehameha Highway at Richardson Park.

Significant Stationary Views

Important pedestrian views into Pearl Harbor can be seen from Waipahu High School, Leeward Community College, at Pearl Harbor Park and at Richardson Park near the Aloha Stadium.

9.1.2 SECTION B OF THE SOUTH SHORE VIEWSHED, KEEHI LAGOON

The Keehi Lagoon section consist of the area between the airport and Sand Island. Industrial activities are the primary characteristic of this section.

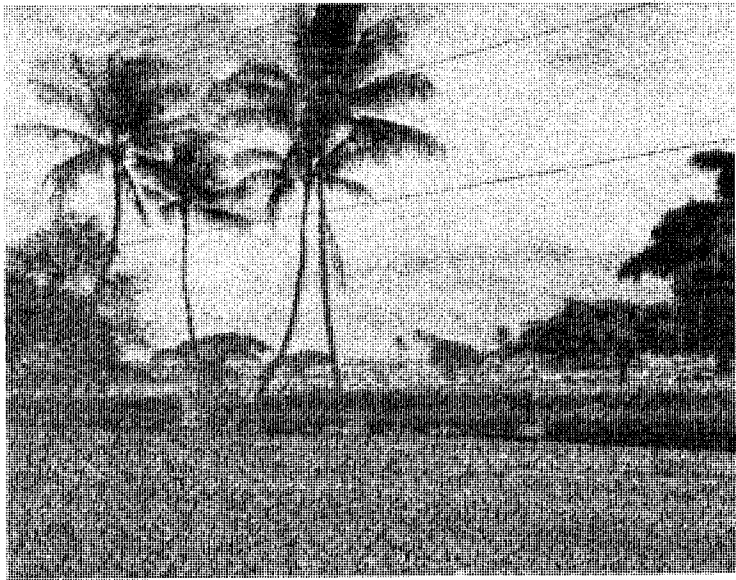
Keehi Lagoon is the primary visual resource of this section and roadway views into the lagoon consist of an intermittent view off Kamehameha Highway near Keehi Lagoon Park and views from Lagoon Drive.

Significant Roadway Views

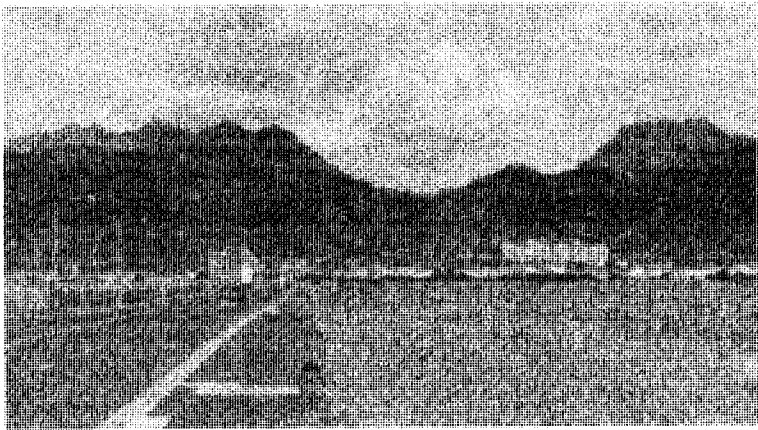
- PUC-3
Intermittent views into Keehi Lagoon from Kamehameha Highway.
- PUC-4
Continuous views into Keehi Lagoon from Lagoon Drive.

Significant Stationary Views

Pedestrian views from Keehi Lagoon Park.



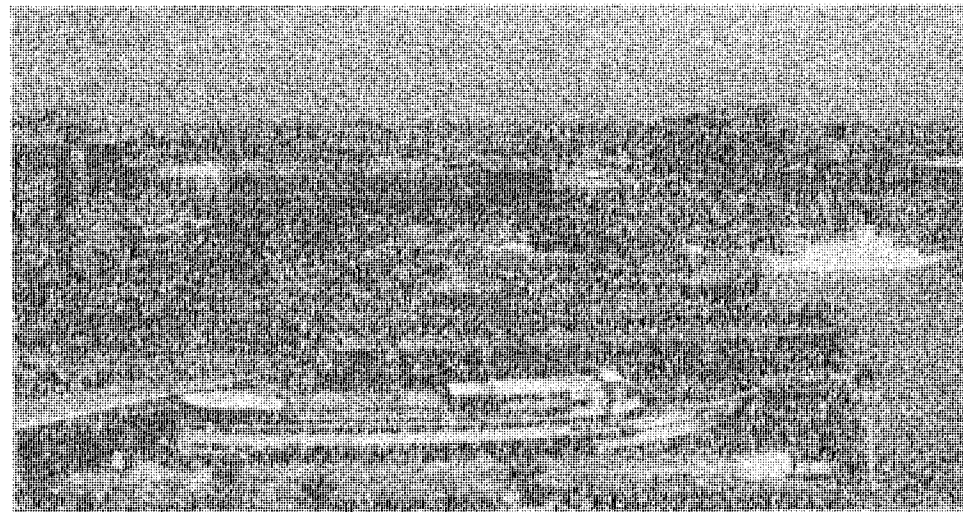
9.1 View into Pearl Harbor Park from Kamehameha Highway



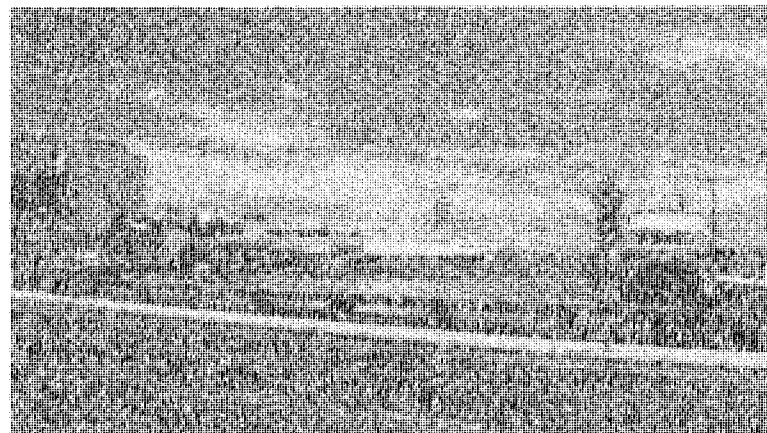
9.2 Mauka view from Lagoon Drive



9.3 View across the South Shore Viewshed from Lagoon Drive



9.4 Honolulu Harbor and Kakaako



9.5 View opening of Honolulu Harbor as seen from Nimitz Highway



9.6 Pedestrian view of the downtown skyline from Sand Island Recreational Park

9.1.3 SECTION C OF THE SOUTH SHORE VIEWSHED, DOWNTOWN

This section includes Honolulu Harbor, Sand Island, and the downtown business community. The SMA Boundary cuts across the harbor to Sand Island and excludes the entire downtown area. Nevertheless, the juxtaposition of Sand Island, Honolulu Harbor, the downtown skyline and the Koolau Mountains are interrelated in establishing the visual composition and quality of the area. A strong sense of urban intactness and the importance of the mauka-makai view axis are the primary features of the area.

Stationary views from Sand Island Park are particularly significant in capturing the visual quality of this area and in illustrating the unity between the built environment and Koolau Mountains in the background. These views are vivid and demonstrate high urban intactness.

Significant Roadway Views

PUC-5

Linkage of continuous and intermittent views of the Honolulu Harbor as seen from Nimitz Highway.

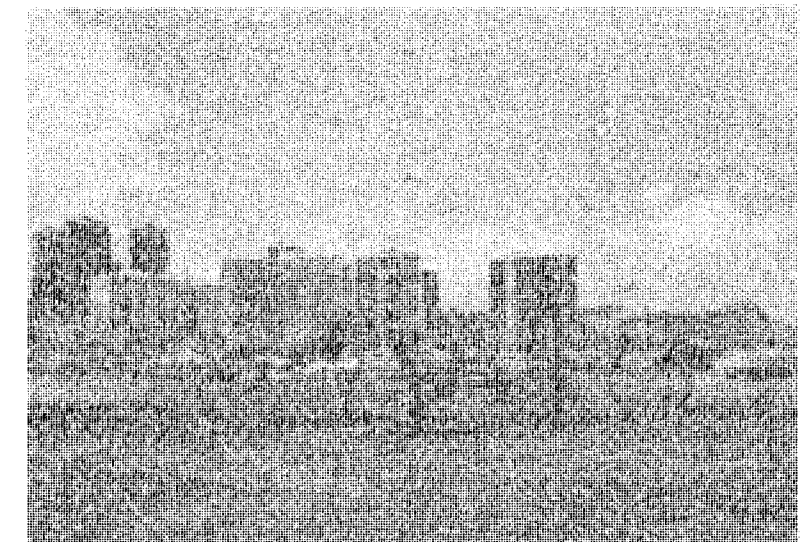
Significant Stationary Views

Significant stationary views are from various points at Sand Island Park, providing vivid viewing opportunities laterally, both east and west and in the mauka direction.

9.1.4 SECTION D OF THE SOUTH SHORE VIEWSHED, ALA MOANA

The Ala Moana Section covers the area from Kakaako to Diamond Head. As in downtown, intensive urban uses are the primary characteristics of the area and visual quality is determined relative to this trait. The interplay between open space, the built environment and the angular configuration of the shoreline gives this section its visual interest.

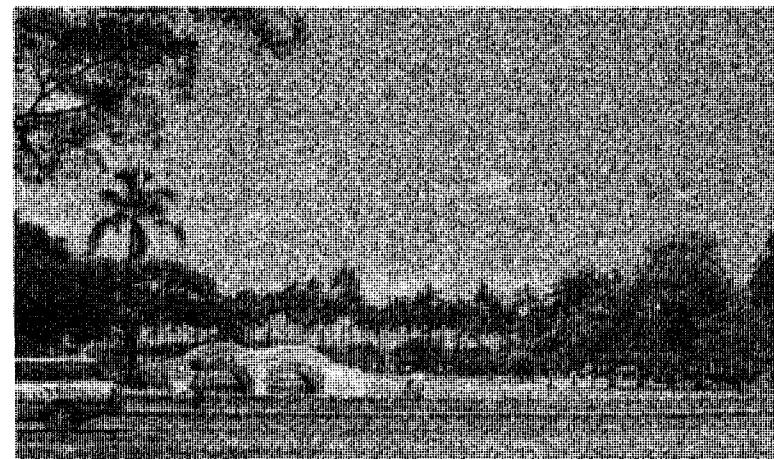
Coastal resources include the entire shoreline area and adjacent open spaces. Ala Moana Park, Kapiolani Park, Kewalo Basin, Waikiki Beach and the Ala Wai Yacht Harbor hold particular importance as both coastal and recreational resources from which vivid pedestrian views can be enjoyed.



9.7 View of the Waikiki skyline from Magic Island



9.8 View opening of Kewalo Basin



9.9 View into Ala Moana Park



9.10 Ironwood trees as an important landscape feature along Kalakaua Avenue

Significant Roadway Views

PUC-6
Continuous makai views across Kewalo Basin and Ala Moana Park.

PUC-7
Intermittent makai views from Kalia Road across Fort DeRussy Park and the Ala Wai bridge.

PUC-8
Continuous makai views along Kalakaua Avenue from Kuhio Beach to the Natatorium area.

PUC-9
Intermittent views along Diamond Head Road.

Significant Stationary Views

Important stationary views are from Point Panic and the triangular peninsula at Kewalo Basin, Magic Island, the Ala Wai Yacht Harbor, Kuhio Beach Park and Waikiki shoreline near Queen's Surf. These stationary views are highly vivid and valuable in establishing the urban character of the PUC.



9.11 Kalakaua Avenue

9.2 VIEW CONCERNS/OPPORTUNITIES

The primary view concern within the PUC is the retention and enhancement of open space which allow for enjoyment of the coastal environment and the diversity of the urban environment.

Based on future redevelopment schemes, several opportunities to pursue this concern are present within the Kakaako area, at Kewalo Basin, and in the Waikiki areas. This concern can be best met with a strong focus on the pedestrian environment and the streetscape. Stepped building heights from the shoreline, open space and landscaping, and pedestrian linkages between open spaces are key elements to a strong pedestrian environment.



9.12 Pedestrian view of the Waikiki skyline

10. EWA

Ewa is different from all other districts inventoried in this study. The area has traditionally been used for Agricultural, Military and Industrial uses. Ewa has never been acclaimed for its scenic qualities and not a single scenic lookout or provision for roadside viewing can be found today within the district. Nevertheless, the area is targeted for substantial new development. Major proposed developments include the West Beach, the Deep Draft Harbor, the Ewa Marina development and the Secondary Urban Center.

Inventory of coastal views is limited to areas accessible to the general public. Immediately apparent is the flat terrain and absence of predominant land features. As a result, views are decentralized with no particular focus. This is reflected in the Development Plan text regarding public views which do not identify any specific view, dominant feature or other particular characteristics for the area. Instead, it generalizes with the following two statements:

- In order to promote pleasing and attractive living environments in existing new neighborhoods, mauka and makai views, and views of central Honolulu shall be protected whenever possible.
- Views from public streets and thoroughfares to the mountains and sea shall be preserved and enhanced whenever possible.

Noteworthy is the DP statement calling for "special building heights, setbacks, design and siting controls." Such special controls have been established for the West Beach resort development, embodied within City Council Resolution 86-61,

containing Urban Design Provisions, Exhibits A and B. Similar provisions for the Secondary Urban Center and the Ewa Marina have not been adopted.

Coastal views for the Ewa area are studied according to the following format:

West Beach Viewshed
South Shore Viewshed, Section A, Barbers Point

10.1 WEST BEACH VIEWSHED

The West Beach Viewshed will be the recipient of much of the future development previously described. This viewshed is divided from the Waianae coast by a descending ridge near the Kahe Point power plant. Currently, the primary public views into this viewshed are from Farrington Highway, nearly a mile from the shoreline at an elevation of approximately 60 feet. Except for a stand of Coconut palms, the view holds no particular significance in its foreground or background. The SMA boundary is near the shoreline, cutting across the West Beach development.

The proposed West Beach development will result in a series of resort structures up to 150 feet in height along the shoreline (starting at a ground elevation of approximately 30 feet). This land use pattern will create a new and prominent skyline, visible from the coastal highway. The foreground views from Farrington Highway will look into the proposed golf course and a series of low and medium density apartments.

The new deep draft harbor and small boat harbor should also become prominent view objects from the shoreline.

An entirely new pedestrian environment will be created at the shoreline consisting of four ocean lagoons, a small boat marina, major view corridors aligned along cul-de-sacs, various landscape features and plantings along the shoreline. According to the land use and circulation patterns, roadway views of the ocean will probably be visible primarily from the cul-de-sacs off the interior West Beach loop road. Two important statements regarding views are made in the Urban Design Provisions for West Beach:

- The design of West Beach has a primary objective of maximizing overall views of the ocean amenities which are the focal point of the development.
- Views from Farrington Highway should be considered.

Significant Roadway Views

EW-1
Continuous makai views from Farrington Highway across the proposed West Beach development, and a view corridor down the highway across Kahe Beach Park.

10.2 WEST BEACH VIEWSHED CONCERNS/OPPORTUNITIES

There are two major concerns relating to coastal views within the West Beach Viewshed. The first relates to Farrington Highway in its juxtaposition with the West Beach Resort Development. Today the most significant coastal view of the ocean is experienced from Farrington Highway in the area between Nanakai Gardens and Kahe Point Beach Park. The juncture of Farrington High-

way with the ocean at this point will represent an important transitional zone between the more urban attributes of Ewa and the dominate rural and coastal character of the Waianae Viewshed. Therefore it is important to establish a wide and distinctive makai view corridor overlooking the western end of the West Beach development. The importance of this view corridor is recognized in the "Urban Design Provision for West Beach" which is referenced as Exhibit "A" under Resolution 80 - 61 approving the SMP for West Beach Estates. These same urban design provisions also recognize the importance of creating view corridors to the ocean from within the development.

The second important consideration in the resort development is to insure that public views of the shoreline from the internal loop road and cul-de-sacs, and lateral pedestrian views along the shoreline, especially in the Waianae direction, are given the highest priority relative to the siting of buildings.

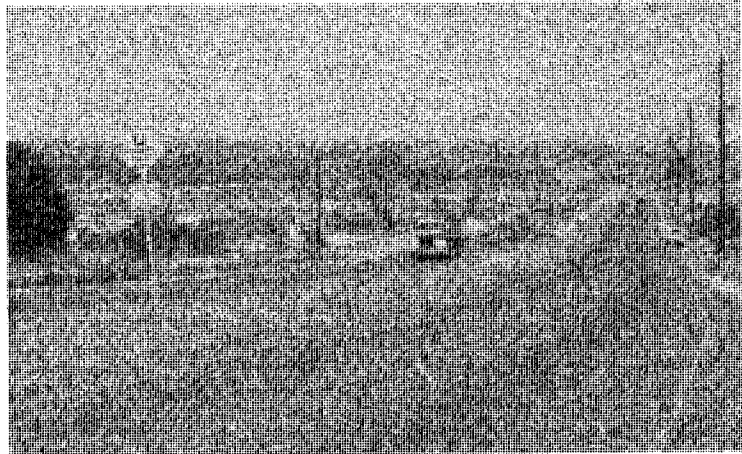


10.1 Makai view from the coastal highway towards Campbell Industrial Park

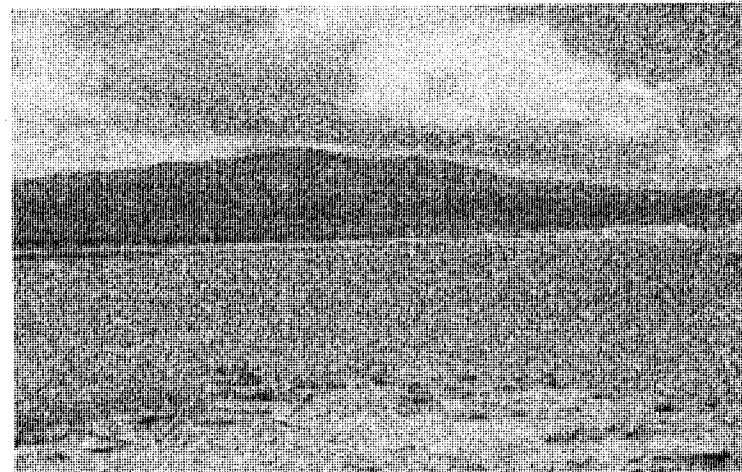
10.3 SECTION A, SOUTH SHORE VIEWSHED, EWA

The Ewa section contains Campbell Industrial Park, Barbers Point Naval Air Station, Ewa Town, the proposed Ewa Marina, and Iroquois Point. The terrain is flat with no significant land forms. While expansive, views from Farrington Highway are very distant and have little visual significance due to an absence of noticeable land forms or other focal points.

Much of this viewshed consist of Military property and is not included in this study for analysis. The focus is therefore on the coastal areas occupied by Ewa town and the site of the



10.2 Roadway view from Farrington Highway overlooking the future Secondary Urban Center and West Beach



10.3 Mauka view across the Deep Draft Harbor

proposed Ewa Marina.

The SMA boundary generally follows Ewa Beach Road but jogs inland to include generous portions of Ewa Marina.

Significant Road Views

EW-2
A short segment of Ewa Beach Road provides makai coastal views fronting Ewa Beach Park.

Stationary Views

Stationary views are available from Barbers Point Beach Park in Campbell Industrial Park, Oneula Beach Park at Ewa Marina and Ewa Beach Park. Although these stationary views from the parks may be considered intact, there is no sense of vividness or other visual qualities.

10.4 EWA SECTION, CONCERNS/OPPORTUNITIES

Within the Ewa section, the proposed Ewa Marina development will have minimum impacts upon coastal scenic resources because of its isolation from any significant land forms or coastal view objects. Nevertheless, the project should include provisions for coastal view corridors within the project itself, especially from the internal coastal road system. The pedestrian environment along Fort Weaver Road can benefit from stronger urban design improvements such as street tree plantings, undergrounding of utilities and private sector improvements to commercial and apartment structures. These measures however will not yield coastal viewing opportunities as residential lots are too deep on the makai side of Fort Weaver.

11. WAIANAE

The Waianae mountains with its descending ridges and other significant land forms jutting seaward along the coastline are the most dominant natural features of the Waianae area. These features are visible from most segments of Farrington Highway and all coastal parks. The integrity of such land forms and the condition of public open spaces are critical in determining the visual quality of the area.

- The Waianae Development Plan Ordinance lists several public views of importance. They include :
- Shoreline and ocean views, and views of descending mountain ridges from Farrington Highway and Ulehawa Beach Park.
- All coastal and makai views from shoreline parks.
- Views of Kamaileunu Ridge and Waianae Kai from Waianae High School.
- Panoramic view of Waianae Valley from Waianae Intermediate School.
- Views of Waianae Mountains from Pokai Bay.

The Waianae area is studied according to its three major viewshed:

Makua Viewshed
Waianae Viewshed
Nanakuli Viewshed

11.1 MAKUA VIEWSHED

The Makua Viewshed, extending from Kaena Point to Kepuhi Point, is a large contiguous bay containing 7.5 miles of shoreline. Except for a few small military facilities mauka of the highway, this viewshed is highly intact, free from any signs of urban development. The dry landscape, barren stretches of beach and the imposing Waianae mountains form a visually



11.1 Lateral view of an intact viewshed (Makua Viewshed)

striking and unique environment, rarely found on Oahu. Farrington Highway follows the coastline for the entire distance, providing continuous high quality views of the ocean, the Waianae Mountains, and several small mauka valleys.

The DP land uses within this viewshed are primarily Park and Preservation, and serve to maintain the visual quality of this viewshed.

Significant Road Views

WN-1

Farrington Highway provides one continuous roadway view, capturing coastal and mauka views of high visual quality.

Significant Stationary Views

The entire coastline is designated Park or Preservation, and is accessible to the pedestrian. Significant stationary views are available from the entire length of the shoreline.

11.2 WAIANAE VIEWSHED

The Waianae viewshed extends from Kepuhi Point to Mailli Point. Unlike the neighboring Makua Viewshed, coastal views from the road are fairly limited, occurring in short and unrelated segments.



11.2 View across the Waianae Viewshed from Mailli Point

The Waianae Mountains, Makaha Valley, Mauna Lahilahi, Kamaileunu Ridge and other coastal land forms are the prominent view objects within the viewshed. While views from coastal parks are fairly significant, the coastal highway lacks cohesiveness and is in desperate need of design improvements. Several pockets of pre-SMA apartment buildings exist along the shoreline, further reducing the visual quality of the area.

The SMA boundary moves back and forth across Farrington Highway, often to the exclusion of commercial property which are mixed in with residential and other public facilities along the coastal highway.

The Waianae Viewshed is studied in two sections.

Section A, Makaha
Section B, Pokai Bay

11.2.1 SECTION A OF THE WAIANAE VIEWSHED, MAKAHA

Section A is bracketed by a large descending ridge at Kepuhi Point (Kameaileunu Ridge) and the prominent Mauna Lahilahi coastal land form (approx. 175 ht.). Both land forms are visible along the entire length of Farrington Highway. Another important view object includes Makaha Valley.

Mauka views into Makaha Valley are noteworthy relative to visual unity. The placement of the high-rise structures against the side of this large valley helps to reduce what would otherwise be severe visual encroachment, thereby establishing a sense of unity of the valley's scenic qualities.



11.3 Roadway view into Makaha Valley



11.4 Pedestrian view from the shoreline, Makaha Beach

Due to residential development, makai views are limited to a single opening at the Makaha Beach Park. Other makai views and/or opportunities for creating public views are not likely due to well established residential development along the makai side of Farrington Highway.

Coastal views are severely impacted by midrise apartments adjacent to Mauna Lahilahi, and to a lesser extent at Makaha Beach. The size and juxtaposition of such structures demonstrate poor planning/design sensitivity relative to Development Plan statements of urban design and its provisions for view protection of dominant landmarks. The visual encroachment at Lahilahi is particularly damaging as it can be seen through the Waianae Viewshed.

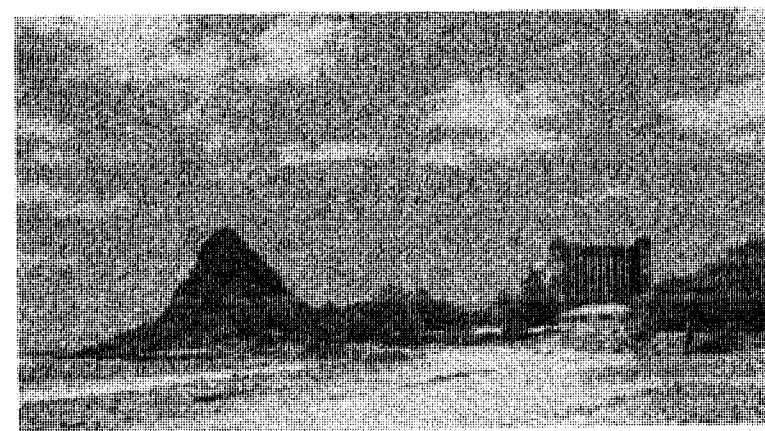
Significant Roadway Views

WN-2

A short segment of Farrington Highway at Makaha Beach Park provides coastal views of Makaha Beach and lateral views along the coastline.

Significant Stationary Views

Important stationary views are from Makaha Beach Park and the public beach area adjacent to Mauna Lahilahi Point.



11.5 Prime example of building encroachment into the view of an important coastal land form (Mauna Lahilahi)

11.2.2 SECTION B OF THE WAIANAE VIEWSHED,

POKAI BAY

Section B ranges from Lahilahi Point to Maili Point. This section of Farrington Highway is the most urbanized area along the Waianae coast. While much of the coastline consist of public property (Waianae Boat Harbor, Waianae High School, Waianae Regional Park, Military, and other PF designations), surprisingly few coastal views from the highway can be found due to building placement and stands of vegetation. As a result, roadway views are again generally oriented mauka, focusing on the land forms and ridges of the Waianae Mountains.

Pedestrian coastal views are numerous from all beach areas. Important pedestrian viewing points include the Waianae Boat Harbor, Pokai Bay, Lualualei and Lahilahi Beach Parks. The Waianae Regional Park (yet to be developed) has the potential for contributing major visual and urban design improvements to the area as it fronts both Farrington Highway and the shoreline.

The coastal land forms that are visible from Pokai Bay such as Puu Mailili, Puu o Hulu Kai, Mauna Lahilahi and several descending ridges are vivid landmarks and are the primary visual attributes of this section of the viewshed.

The highway environment represents low visual unity. Draping overhead utility lines, lack of a cohesive landscape theme, and a general disorder to the urban form along the coastal highway typifies the environment. The Waianae Regional Park and Pokai Bay areas may be key contributors to enhancing the highway environment as they contain significant frontage along Farrington Highway.

Significant Road Views

WN-3

A makai view from Farrington Highway is fronting Mauna Lahilahi Beach Park. In comparison to other view openings along the roadway, this view is relatively short. Its significance is based on the close-up view of the two adjacent apartment buildings in striking juxtaposition with the Lahilahi coastal land form. While vivid in appearance, this particular view represents low visual unity and intactness, severely impacting other views throughout the viewshed because of their dominant location along the shoreline.

WN-4

Pokai Bay Road is a secondary interior road. It is the beginning of a continuous view which extends into the Mailli section. Coastal views are across Lualualei Beach Park and Pokai Beach Park. Other than the length of this view opening, there is nothing visually distinctive about this roadway view.

WN-5

The makai side of the highway is predominantly park area separated by two residential subdivisions. Most of this park land remains in an undeveloped state, landscaped with coastal scrub vegetation, sporadic Coconut trees and Kiawe. Primary view objects include the two land forms (Puu Maillili and Puu o Hulu Kai), both rising to over 700 feet in elevation, the ocean and lateral coastal views as seen across the parks, and the distant Waianae Mountains.

Significant Stationary Views

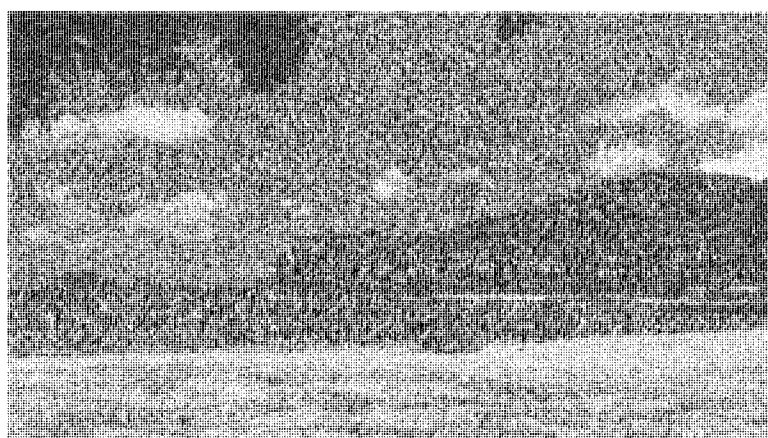
All points along the coastline are designated Park and provide lateral coastal views in both directions.

Stationary Views

Important stationary coastal views are available from the Lahilahi Beach Park, Waianae Boat Harbor, Pokai Bay Beach Park, Lualualei Beach Park, and Mailli Beach Park. These stationary views are linked by the continuous Park designation along the shoreline and are major recreational sites in Waianae. Stationary views are most significant when viewing laterally along the shoreline and viewing back towards the mountains. Views are fairly intact and unified.



11.6 Enhancement opportunities at the entry to the Waianae Boat Harbor as seen from Farrington Highway



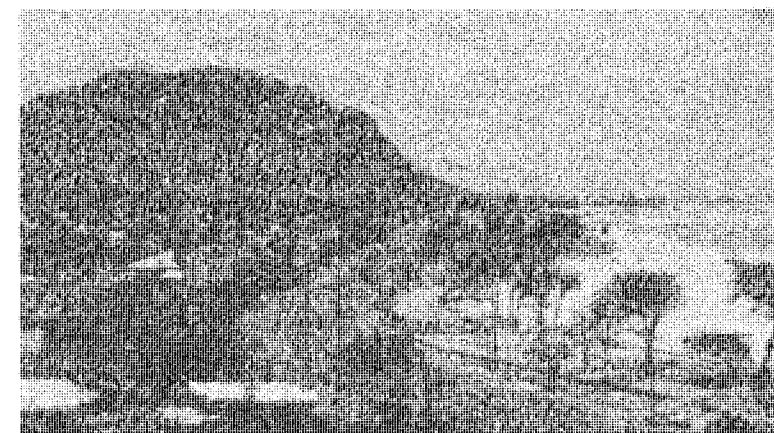
11.7 Views across Pokai Bay (note Mauna Lahilahi in the background)

11.3 NANAKULI VIEWSHED

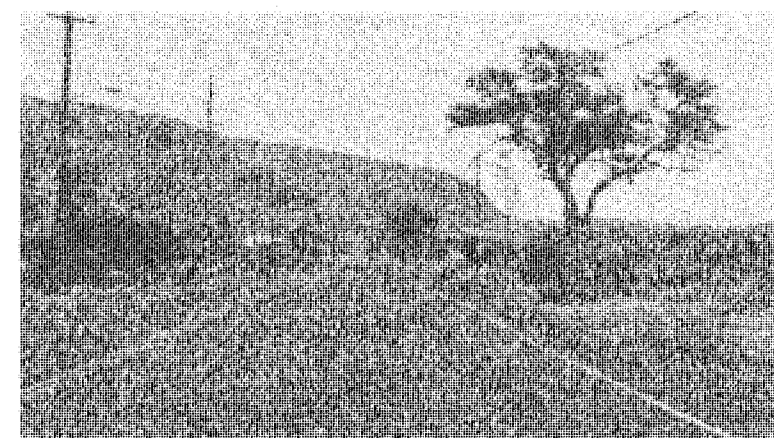
The Nanakuli Viewshed, from Mailli Point to Kahe Point, is the third major viewshed within the Waianae area.

Except for Nanaikapono Elementary School and one tract of residential lots, the entire makai side of Farrington Highway is designated Park.

Lateral coastal views are available from all points along the shoreline, and are most significant in the Kaena direction due to the descending ridges which can be seen in the distance.



11.8 View of the Mailli shoreline and streetscape as seen from the Comprehensive Health Center in Waianae



11.9 View of the coastal highway in Nanakuli

The Kahe Point Power Plant located on the mauka side of the highway is a dominant man-made feature imposed against a pocket of the Waianae Mountains. Similar to the Lahilahi example, it illustrates significant violations to the natural land forms of the area with a visual impact well beyond its immediate surroundings.

Significant Road Views

WN-6

This stretch of Farrington Highway provides significant mauka and makai views as well as significant lateral views sitting down the highway and focusing on the land forms at either end of the viewshed. Makai views along some portions of the highway are blocked by sand dunes.

11.4 WAIANAE VIEWSHED CONCERNS AND OPPORTUNITIES

The Waianae area is unique in that substantial portions of the land between the coastal highway and the coastline is under public ownership. Opportunities for view enhancement are possible at undeveloped or partially developed sites. In such cases, the development and maintenance of Park and Public Facilities are the primary vehicles in enhancing both public views of coastal resources and improving the overall urban quality of the area.

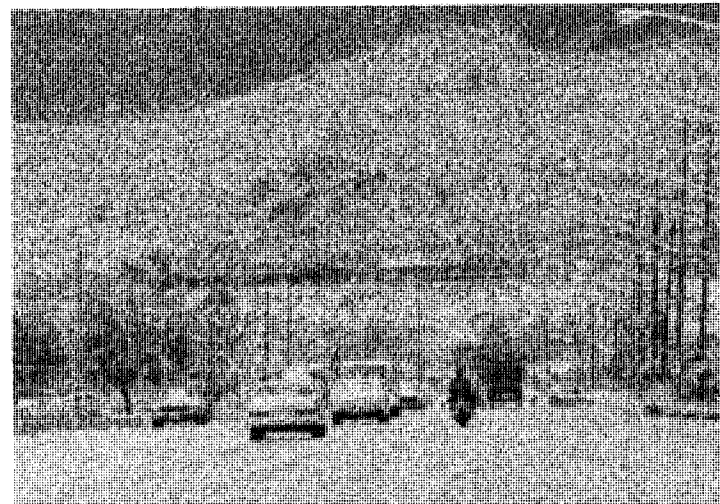
In other situations, views are blocked or encroached upon due to urban development and little can be done at this point except to take note of several instances.

One instance is the Lahilahi area where a prime example of land use/coastal land form conflict exist. As an example, this visual conflict between the man-made structure and the natural land form should never be repeated. Further development at the base of Mauna Lahilahi will require careful siting of structures to avoid any further infringement upon the visual qualities of Mauna Lahilahi.

Other lateral and mauka views may be vulnerable to the Industrial, Commercial and Public Facilities designated at the base of significant land formations along the Waianae coast, especially in the area opposite Lualualei Beach Park (Puu Mailili). As a positive example The Comprehensive Health

Center, which is tucked into the Puu Mailili land form, represents a well conceived design solution and should serve as a prototype in similar situations.

The DP General Provision which calls for the underground placement of utilities can greatly benefit the visual appearance of the Waianae area. Implementation of this policy would be a major step in improving the visual quality of the coastal highway environment.



11.10 View of the Comprehensive Health Center tucked into the Puu Mailili land form



11.11 View of coastal land forms in Waianae



11.12 Shoreline view and coastal land forms in Waianae

12. RECOMMENDATIONS

The recommendations of this study fall into four categories.

- Classification of Viewsheds
- Development Plans
- Land Use Ordinance
- SMA Ordinance

12.1 VIEWSHED CLASSIFICATIONS AND GENERAL RECOMMENDATIONS

The following list summarizes all viewsheds and sections identified in this study, and classifies them according to type. Classifications are based on the vehicular experience from the coastal highway (see Exhibit 5).

TYPE

NORTH SHORE

North Shore Viewshed	
Kaena	1
Mokuleia	2
Haleiwa	5
Kawailoa	2
Sunset Beach	2

KOOLAULOA

Kahukū Viewshed	2
Laie/Kaaawa Viewshed	
Malaekahana	2
Hauula	2
Kahana	1
Kaaawa	2

KOOLAUPOKO

Kaneohe Bay Viewshed	
Kahaluu	2
Heeia	2
Kailua Bay Viewshed	4
Waimanalo Bay Viewshed	
Waimanalo	2
Makapuu	1

EAST HONOLULU

Koko Head Viewshed	1
Maunalua Bay Viewshed	4

PRIMARY URBAN CENTER

South Shore Viewshed	
Ala Moana	5
Downtown	5
Keehi Lagoon	5
Pearl Harbor	5

EWA

South Shore Viewshed (Ewa)	6
West Beach Viewshed	6

WAIANAE

Nanakuli Viewshed	3
Waianae Viewshed	
Waianae	3
Pokai Bay	3
Makua Viewshed	1

The recommended management policies for each viewshed classification are not intended to be mutually exclusive. They merely represent the major policies applicable to that particular viewshed. The management policies for all viewshed have relevance to each viewshed as may be dictated by the particular demands of a development proposal.

Type 1

Type 1 viewsheds demonstrate high levels of visual intactness and exemplify the purpose of many of the scenic and open space policies and objectives contained within the General Plan, Development Plans and HCZMP. The directives to "preserve and protect" scenic and open space resources are most applicable within intact viewsheds. The following viewsheds fall within this classification:

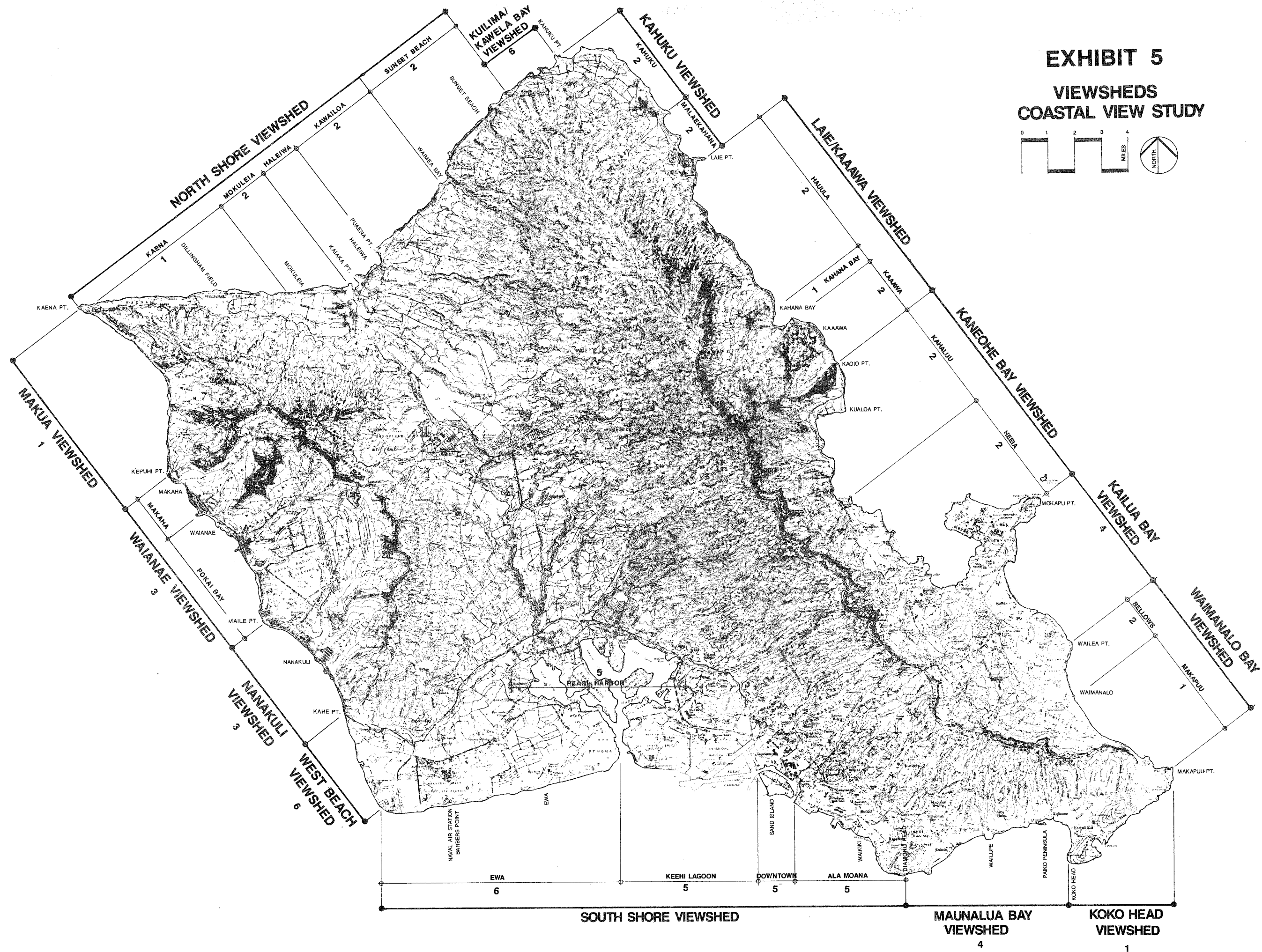
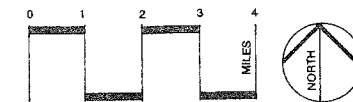
- Makua Viewshed
- North Shore Viewshed, Kaena Section
- Laie/Kaaawa Viewshed, Kahana Bay Section
- Waimanalo Bay Viewshed, Makapuu Section
- Koko Head Viewshed

To a large degree, current land use policies support the protection and preservation of these intact viewsheds with extensive development plan designations of Preservation and Park. Conflicts (visual encroachment) normally arise from public improvements such as street signage, park structures, or the imposition of military facilities. Other sources of conflict may arise from L.U.O. Conditional Uses or or the creation of a special subzone by DLNR in the State Conservation District. Examples of a special subzone are Sea Life Park and Hawaii Loa College.

EXHIBIT 5

VIEWSHEDS

COASTAL VIEW STUDY





12.1 Intact viewshed, Makua

Generally however, these intact viewsheds are fairly well protected and development pressures are kept in abeyance by current policy declarations. Conversely, DP land use changes (or other such action) in favor of intensive urbanization may easily impact the fragility of such viewsheds.

Managing intact viewsheds will rely largely upon the ability to regulate land use objectives and policies which will respect the scenic qualities of these viewsheds.

Other management policies include:

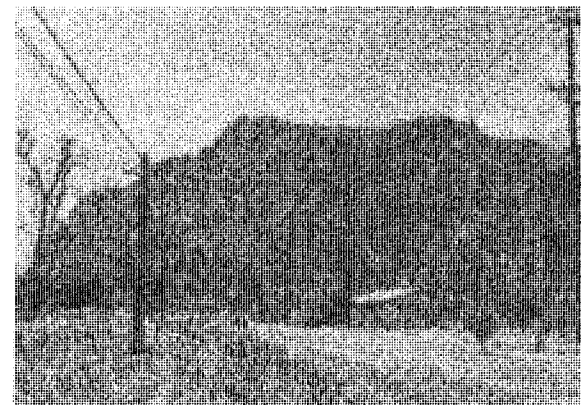
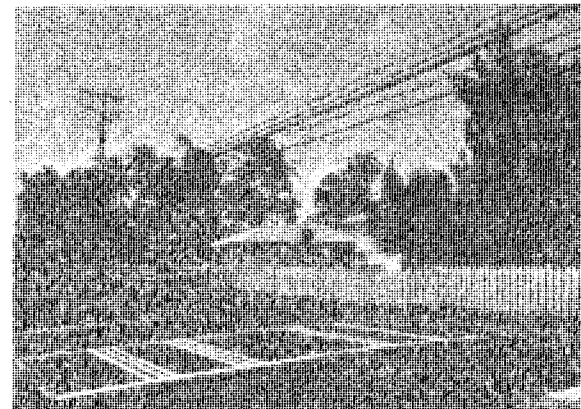
- Expand SMA boundary to include coastal land forms currently outside the boundary similar to what is suggested in section 12.4
- Scrutinize all SMA and other land use permits and public improvements for compliance with view objectives
- Avoid major grading and removal of roadside vegetation within the SMA

Type 2

Type 2 viewsheds are generally found in rural settings and are flanked with residential, agricultural and preservation land uses along the coastal highway. Open space and important landscapes may be associated with such viewsheds. Type 2 viewshed include:

- North Shore Viewshed, Mokuleia, Kawaiioa, and Sunset Beach Sections
- Kahuku Viewshed
- Laie/Kaaawa Viewshed, Malaekahana, Hauula, Kaaawa Sections
- Kaneohe Bay Viewshed, Kahaluu, Heeia Sections
- Waimanalo Bay Viewshed, Waimanalo Section

12.2 Rural settings characterize Type 2 Viewsheds



12.3 Type 2 Viewshed, Waimanalo

Common to these viewsheds is the interplay between the continuous and intermittent views from the coastal highway.

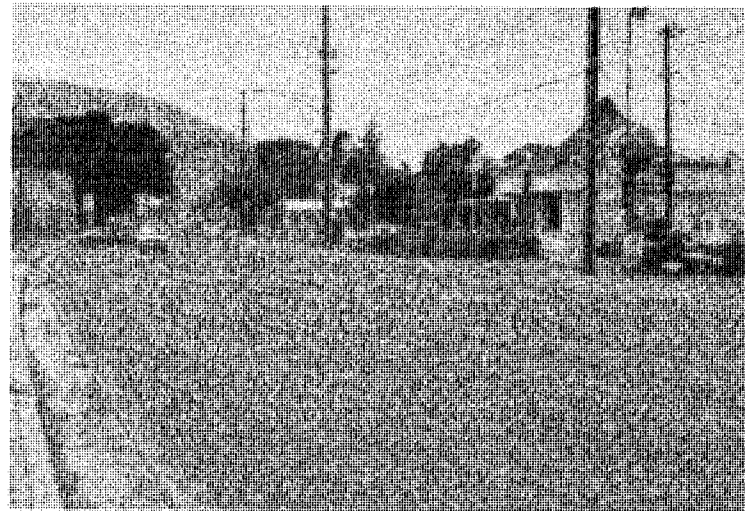
Development (usually residential) and vegetation on the makai side of the road are the primary elements that block out coastal views but these features are not considered to be major conflicts. The notion of eliminating residences for the sake of view enhancement is an extreme measure with negligible net results.

Management emphasis should instead focus on persistent maintenance of existing view openings and preserving the rural character along the coastal highway. Due to its rural/residential character, design options regarding front yard walls, fences and landscaping may be the most effective measure in maintaining the quality of the drive.

Conflicts stem from the imposition of structures that are inconsistent with the scale of the area. Such conflicts are compounded when sited on parcels that are too small to allow for significant design options. Bulky structures should not be permitted on the makai side of the road unless the parcel is of sufficient size to allow for generous setbacks, view corridors, landscaping or other special conditions that address view concerns.

Other management recommendations for type 2 viewsheds are:

- Clustering of structures should be emphasized to encourage the creation of view corridors or open space breaks
- Solid walls and fences along public parks should be avoided
- Open bridge railings should be used
- Location of utilities should consider scenic views



12.4 Type 3 Viewshed refers to the Waianae coast

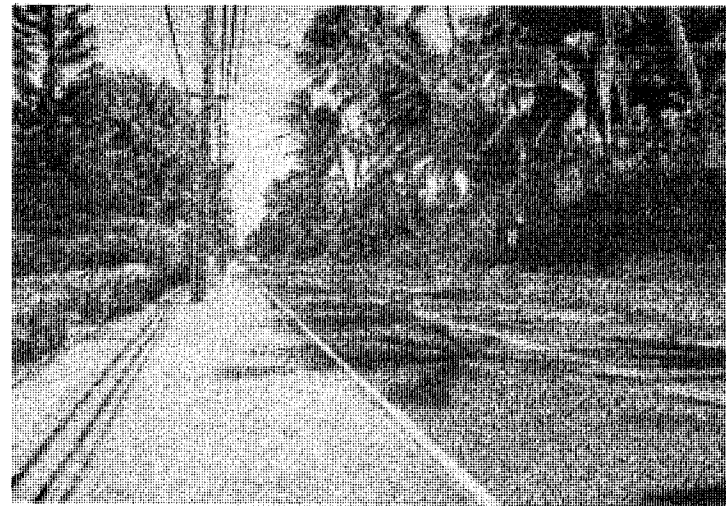
Type 3

Type 3 viewsheds refer specifically to the Waianae and Nanakuli Viewsheds where coastal views and the design of the coastal highway frontage including buildings and landscaping are the key components to visual resource management of the area.

Specific measures that are applicable include the following:

-
- Establish a consistent SMA Boundary alignment to include the mauka side of Farrington Highway which will allow for the protection/enhancement of coastal views and beautification of the coastal highway environment
- Scrutinize the placement of structures and landscape plantings within coastal parks to avoid blocking or diminishing view qualities
- Keep overhead utility lines on the mauka side of the road
- Minimize roadway signs

The Waianae coast also contains several important coastal land forms. Although DP and zoning maps show no land use conflicts, important coastal land forms should be identified within the DP Special Provisions to insure that future degradation (such as Mauna Lahilahi) does not occur.



12.5 Kalaheo Avenue in Kailua characterizes the Type 4 Viewshed

Type 4

Type 4 viewsheds occur in suburban residential communities.

Viewsheds falling into this classification include:

- Kailua Bay Viewshed
- Maunalua Bay Viewshed

Both of these viewsheds are fully developed with residential uses between the shoreline and coastal highway. Coastal views are usually the result of public parks. It is common to find a narrow visual effect taking place along the coastal roadway. The fact that existing single family residences are exempt from the SMA procedure further limits management options.

The focus of visual resource management within these viewsheds can best be served by:

- Scrutinizing public improvements to public beach parks to insure that existing view openings are not encroached upon with unnecessary screening or the placement of structures

Type 5

Type 5 viewsheds occur in highly urbanized areas. The dominance of the built environment and the presence of Special Districts are the primary characteristics of such viewsheds. Due to its urban character, these viewsheds are dynamic, and in a constant state of modification. Viewsheds falling within this classification are:

- South Shore Viewshed, Pearl Harbor, Keehi Lagoon, Downtown, and Ala Moana Sections
- North Shore Viewshed, Haleiwa Section



12.6 Type 5 Viewsheds are highly urbanized

Conflicts generally stem from architectural and site design. Building heights, building materials, landscape treatment, pedestrian concerns and the placement of structures within view corridors are the types of issues that need attention.

While most Special Districts are located within type 5 viewsheds, the thrust of Special Districts vary and do not necessarily address the concerns of coastal views. However where appropriate, the review of Special District and SMA projects should be held concurrently.

Due to the urban character of type 5 viewshed, pedestrian concerns should be a major focus of the SMA review process, with emphasis on the following types of objectives:

- Creative architectural and site planning solutions to provide visual linkages between the streetscape and the waterfront
- Utilize building height setbacks for structures along the shoreline
- Support and promote a pedestrian waterfront environment along the urban shoreline
- Identify the mauka views of the Koolau Mountains in relationship to the built skyline (as from Magic Island, Kewalo Basin, Sand Island, etc.) as important features to the PUC

Type 6

Type 6 viewsheds refer specifically to the West Beach Viewshed, the Ewa section of the South Shore Viewshed, the Kuilima Viewshed and the Kawela Bay Viewshed. In both cases, enhancement to coastal views and visual resources are linked to large development proposals.

The West Beach, Ewa Marina and the deep draft harbor represent significant opportunities to fulfill the recreational and scenic/open space objectives of 205A.

The key elements to managing these viewsheds are:

- Physical and visual access to shoreline areas from within new developments and building setbacks which permit lateral coastal views

12.2 DEVELOPMENT PLANS

As noted earlier, the Special Provisions portion of each Development Plan area include an identification of significant open spaces and public views. Their inclusion within the Development Plans conforms to the mandates of the City Charter.

The inventory conducted for the Coastal View Study revealed several additional public views which should be included.

North Shore

- Panoramic view of the Waianae Mountains from Farrington Highway between Kaena Point and Dillingham Air Field.
- Ocean views from Farrington Highway between Crozier Drive and Kaena Point.
- Views of Kaiaka Bay from Haleiwa Road at Paukawila Stream.
- Views of Waialua Bay and Haleiwa Harbor from Haleiwa Road, Kamehameha Highway, Haleiwa Beach Park and Alii Beach Park.
- Lateral views from Puaena Point.
- Lateral views from Pupukea Beach Park.

Koolauloa

- None to be added.

Koolaupoko

- View of Kahaluu Fish Pond from Kamehameha Highway. View of Waihee Stream from Kamehameha Highway and Kahekili Highway.
- View of Molii Fish Pond from within Kualoa Park.
- View of Kualoa Park from Kamehameha Highway.
- View of Heeia Meadowlands from Kahekili Highway.

- View of Kaneohe Bay from H-3 between KMACS and the Saddle Road.
- Views of Kawainui Marsh from Mokapu Boulevard, Kalanianaʻole Highway and Kailua Road.

Ewa

- Makai view from Farrington Highway at entrance to West Beach.
- Makai view from West Beach coastal road.
- Waianae coastline view from shoreline at West Beach.
- Mauka and lateral views from Small Boat harbor and Deep Draft Harbor.

Waianae

- Views of Mauna Lāhili from Farrington Highway at Lāhili Beach Park and the public beach area west of Lāhili

East Honolulu

- Coastal views along Kalanianaʻole Highway from Koko Head to Makapuu Head.

Development Plan listings in most instances provide specific descriptions in identifying the particular view to be protected by stating the viewing location and the view object. In these cases the instructions to implementing agencies are very helpful. General language which does not convey the particular view corridor to be protected should be avoided.

The Development Plan Land Use Maps in general have designated low intensity land uses for the land area makai of the coastal highways. This includes preservation, agricultural, and residential classifications. The study did not disclose any areas within or immediately adjacent to the SMA boundary which are recommended for change.

Areas with high intensity land uses within the SMA boundary are as a rule reflective of existing uses or proposed uses which have been conditioned under the approval process to protect scenic resources.

A Development Plan land use amendment should include as a requirement the documentation of coastal views and scenic resources which might be impacted as a result of such an amendment. The inventory and procedures included as a part of this study should be used to identify the scenic resources and the possible adverse impacts. This early analysis can assist in avoiding DP changes which ultimately lead to the degradation of scenic resources. If an applicant's plans are not sufficiently detailed at the time of a request for amendment, at least the applicant has been alerted to scenic views that will have to be addressed at the implementation stage. In the event of concurrent DP and Zoning Amendments, view impacts must be fully addressed in accordance with SMA view analysis procedures.

The Development Plan provisions should avoid setting detailed standards which could limit the implementation of regulations intended to protect coastal scenic resources. Plans submitted solely for development plan amendments usually are not as precise as those found at the Zoning and Shoreline Management stages of approval. Consequently, view corridors and related development standards for view protection are generally better addressed during the implementation process.

As an example the West Beach Special Provisions sets a general standard of 300 feet for structures from the shoreline but gives DLU flexibility to establish the final setback lines based upon design review. In the case of the Kahuku Point/Kawela Bay Resort Area, the Special Provisions contain detailed standards for development within 300 feet of the shoreline, leaving little discretions for DLU in the event more detailed studies reveal unexpected conditions which need to be addressed in a manner which vary from the Special Provisions guidelines.

12.3 LAND USE ORDINANCE

An investigation of the zoning maps did not uncover any inconsistencies with the Development Plans or any instances where the height regulations would adversely impact any of the coastal view resources.

When a separate application for rezoning is submitted for land within the SMA, the applicant should follow the same procedure for view analysis as called for under the SMA application procedures. This would set the basic criteria under which the proposal would be examined when seeking the SMP. As a result of such an analysis it is conceivable that conditions would be attached to the zoning approval which would be more restrictive than the Development Plan provisions or the basic zoning district regulations.

When an applicant seeks both a rezoning and SMP concurrently it is essential the conditions for approval within the Unilateral Agreement for rezoning and the Council Resolution approving the SMP be identical where there is reference to the same subject matter.

An alternative to eliminate any possible inconsistencies between unilateral and resolution approval conditions is to avoid including any reference to or overlapping of SMA Conditions in the unilateral agreement. This procedure would simplify the processing and monitoring requirements for the applicant and the administering agency.

12.4 SPECIAL MANAGEMENT AREA

The inventory of Coastal Scenic Resources revealed several areas where the SMA boundary line should be adjusted to include areas that are directly related to the preservation and protection of coastal scenic views.

In addition to these boundary adjustments, the only other recommendation is the inclusion of the Coastal View Study into the SMA ordinance as a reference for view analysis.

- Extend SMA line to include Commercial and Industrial areas next to bluff at Puu Mailili
- Extend SMA line to bottom of bluffs at Kualoa Ranch, continuing down to Waikane
- Extend SMA boundary up Mokapu Saddle Road and along the H-3
- Extend SMA line for West Beach area to include Farrington Highway to the entrance road to West Beach, the loop road and marinas
- Extend SMA line in Makapuu area to pick up ridge on mauka side of Kalaniana'ole Highway
- Extend SMA boundary to include the sewage treatment plant and the industrial area behind Koko Crater

13. DESIGN GUIDELINES

INTRODUCTION

The purpose of the following principles and design guidelines is to describe and illustrate certain design techniques that may be used for minimizing conflict within the Special Management Area.

The following principles and guidelines are not intended to dictate specific form or function, but are instead presented to generate early design consideration for coastal scenic resources. The intent is to utilize the concepts of these guidelines in preparing permit applications for projects within the SMA.

The principles and guidelines focus on:

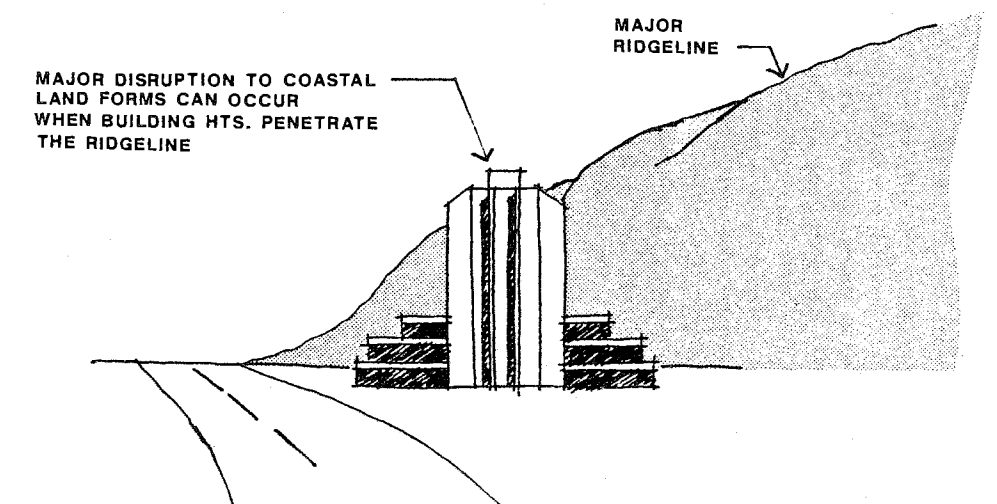
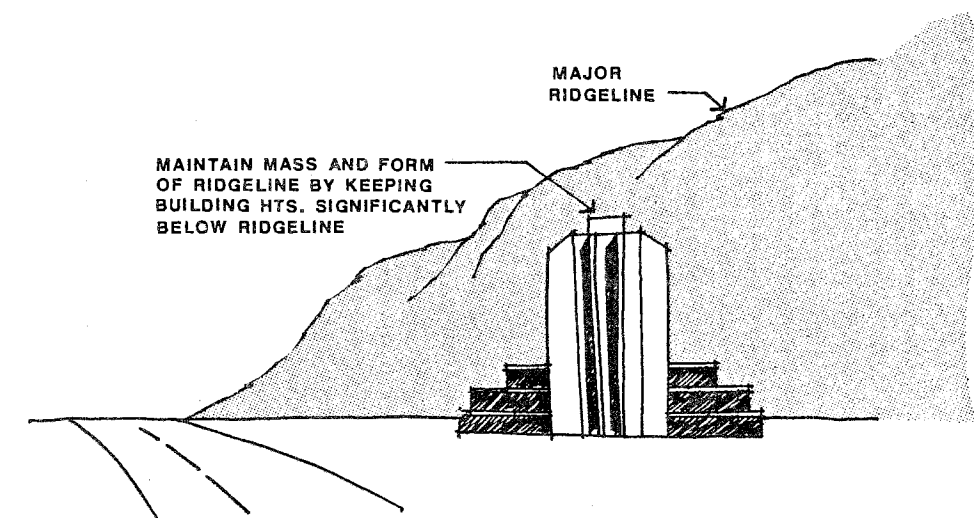
- protection of existing views and coastal resources
- opportunities to create new views
- public improvements along the coastal highway
- pedestrian design considerations in urban areas
- appropriate landscape treatment

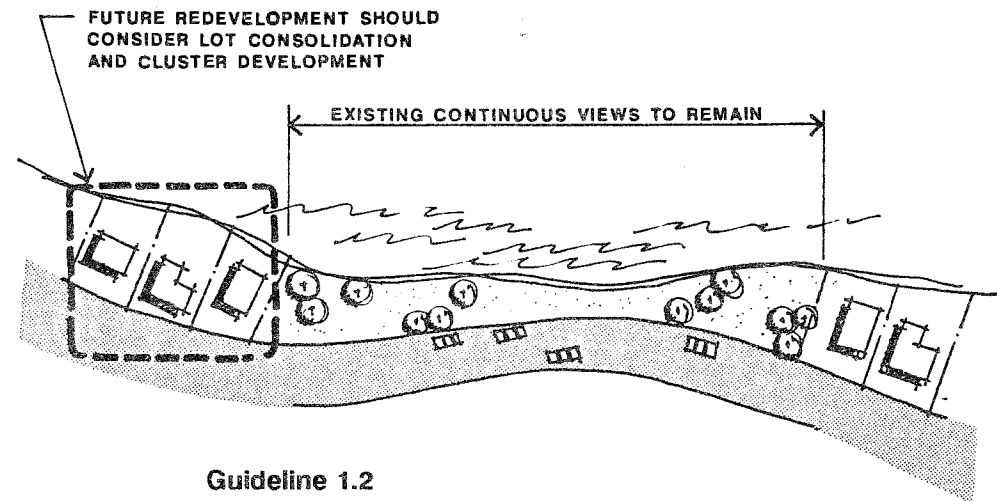
PRINCIPLE 1

DEVELOPMENT WITHIN THE SMA SHOULD NOT ENCROACH INTO EXISTING VIEWS OF SIGNIFICANT COASTAL RESOURCES AS SEEN FROM PUBLIC VIEWING POINTS OR THE COASTAL HIGHWAY.

Guideline 1.1

Building forms should neither encroach into nor penetrate the ridgeline of significant land forms or descending ridges, nor should buildings be sited that create silhouettes against the seaward horizon as seen from public viewing points or the coastal highway.



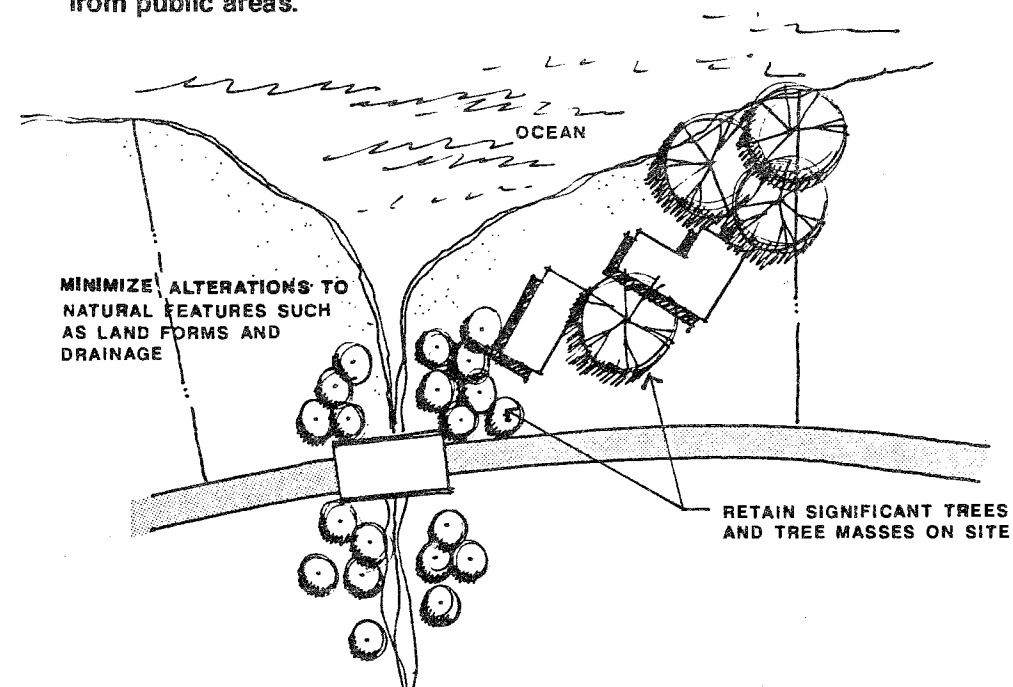


Guideline 1.2

Existing continuous views from the coastal highway should remain unobstructed. Redevelopment adjacent to continuous views should consider clustering of structures as a way to expand the view.

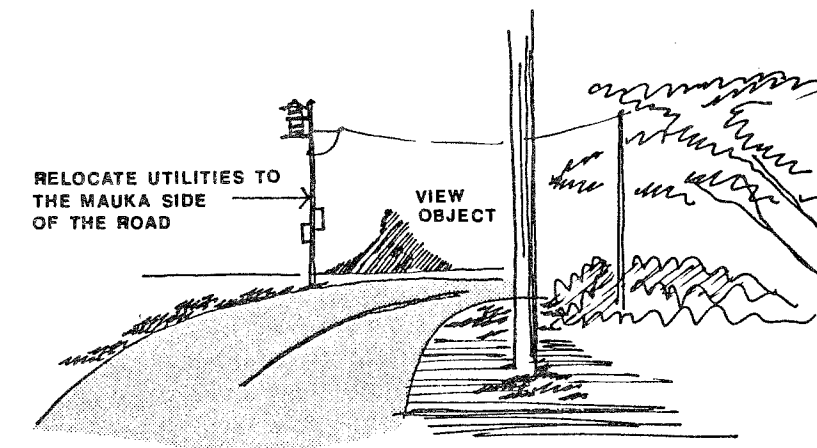
Guideline 1.3

Alteration to existing natural features such as coastal land forms, drainage patterns and stands of existing trees should be discouraged, unless necessary for health and safety, environmental protection, or enhancement of views from public areas.



PRINCIPLE 2

PUBLIC IMPROVEMENTS ALONG THE COASTAL HIGHWAY SHOULD SUPPORT VIEW PROTECTION AND ENHANCEMENT.

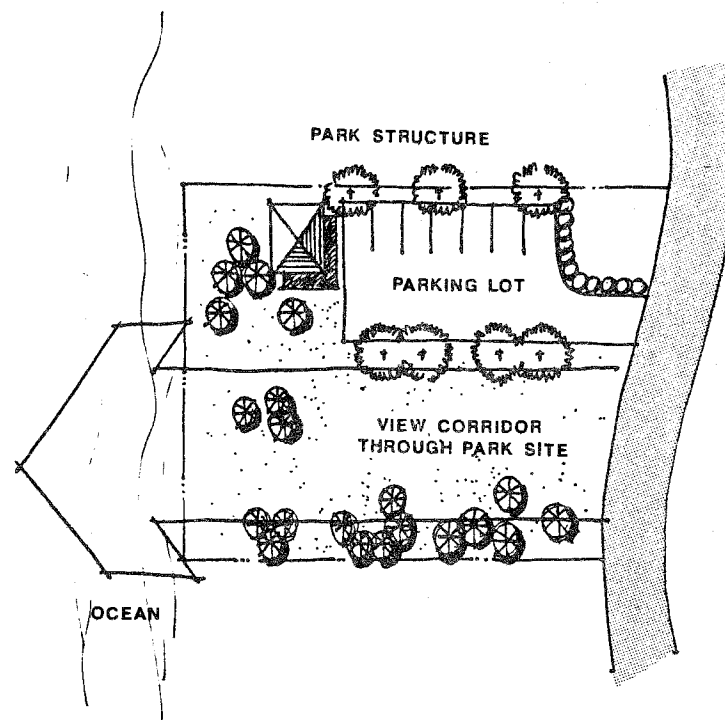


Guideline 2.1

Overhead utilities along the coastal highway should be located on the mauka side of the road or placed underground when they are in an area where they would otherwise interfere with a continuous shoreline view.

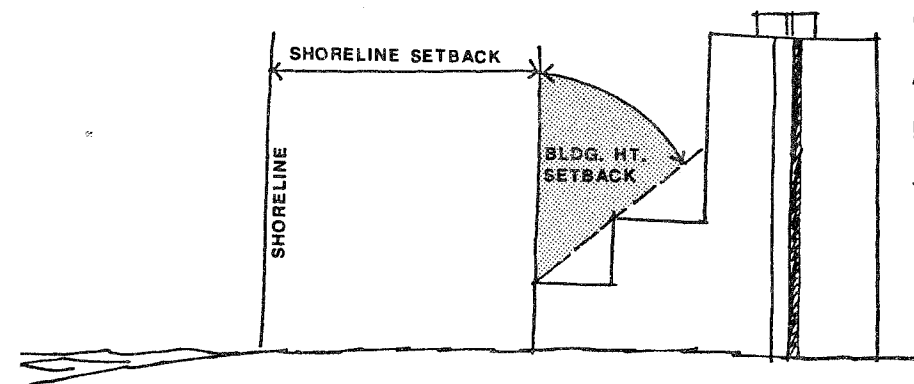
Guideline 2.2

Parking lots and structures within public parks should be sited to minimize encroachment into the coastal view.



PRINCIPLE 3

IN HIGHLY URBANIZED AREAS, DEVELOPMENT PROPOSALS SHOULD ENCOURAGE VIEWING OPPORTUNITIES FOR THE PEDESTRIAN AT THE STREET/GROUND LEVEL.

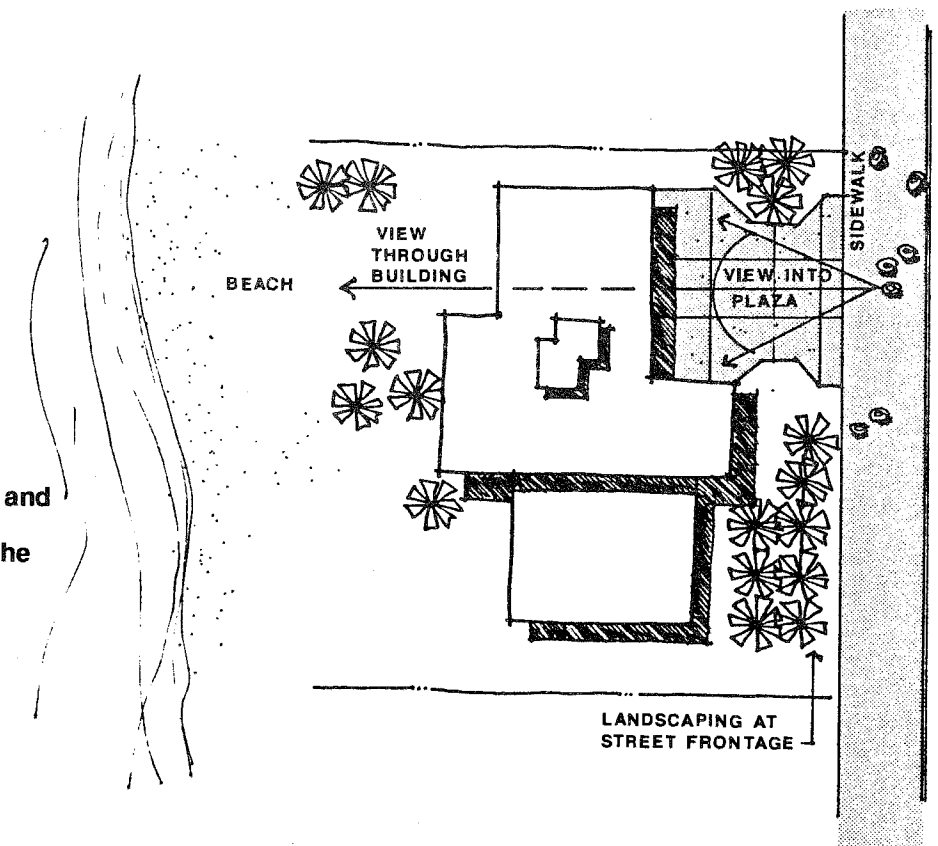


Guideline 3.1

Angled building height setbacks from the shoreline should be utilized to reduce building mass and expand the lateral viewing cone along the shoreline.

Guideline 3.2

The streetscape should be articulated with views into waterfront open spaces, intensive landscape plantings, and other pedestrian amenities that link the streetscape to the waterfront environment.



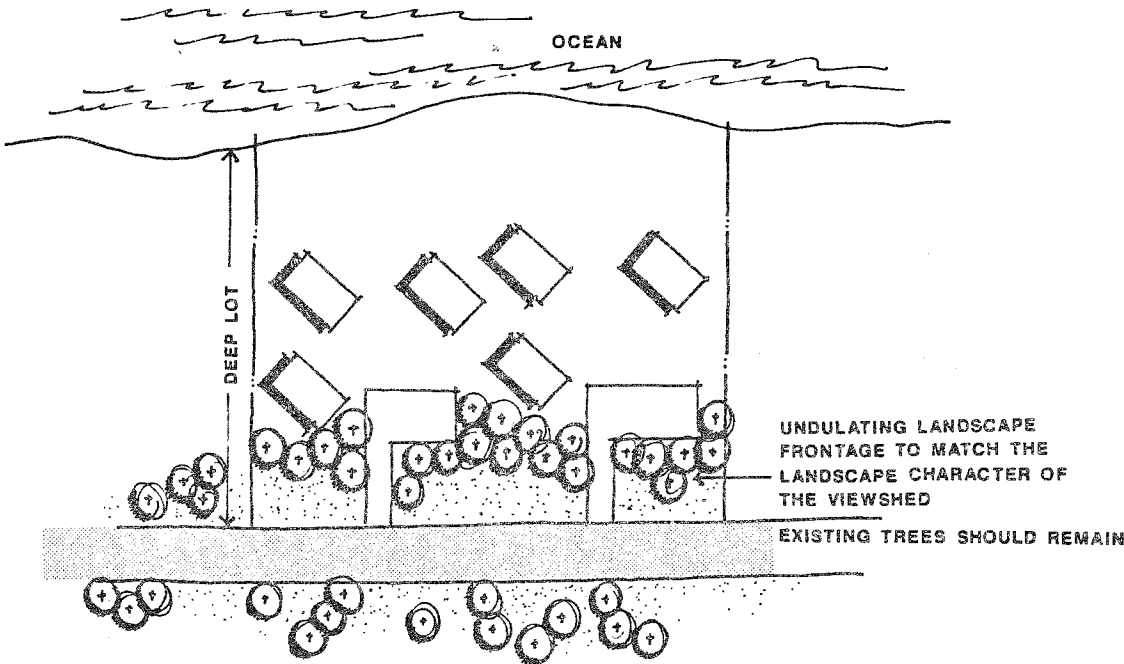
PRINCIPLE 4

APPROPRIATE LANDSCAPING SHOULD BE USED TO INTEGRATE, SOFTEN AND SCREEN PROPOSED DEVELOPMENT.

Guideline 4.1

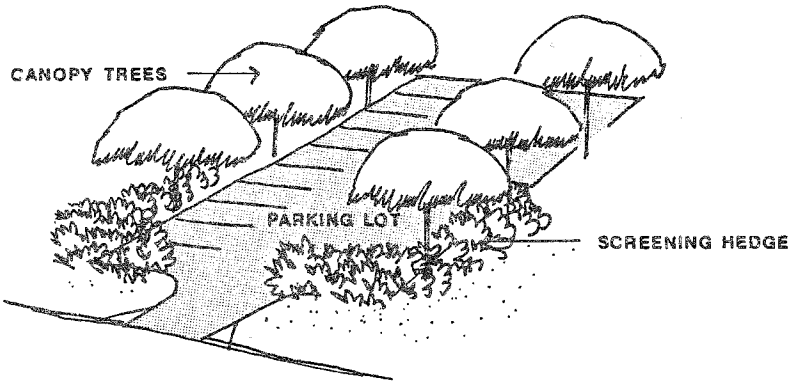
Selected landscape plant material should be consistent with the coastal environment and the character of the viewshed. Stands of existing trees should remain whenever they are healthy, contributing to the view experience and do not foreclose development of the site.

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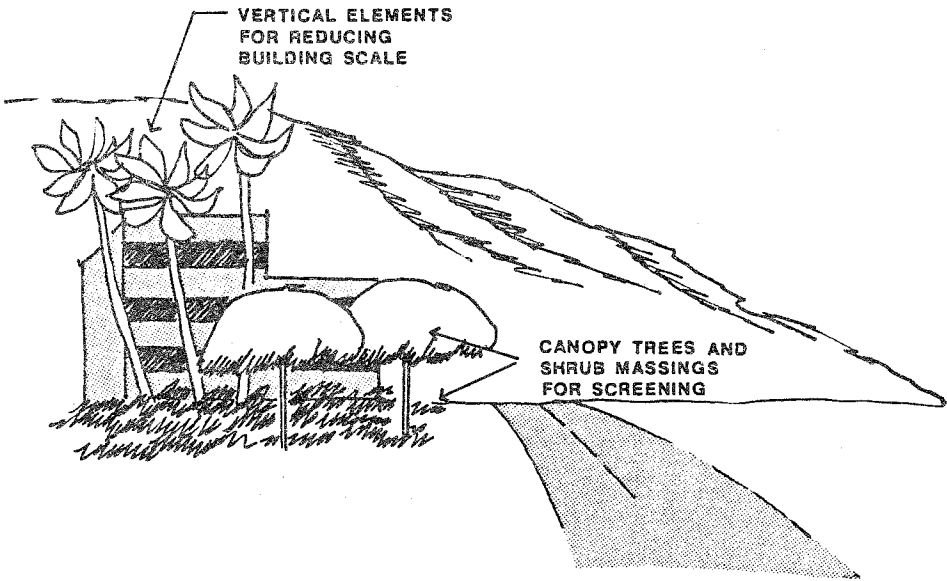
Guideline 4.2

Parking lots should be screened from view from the road and landscaped with canopy trees.



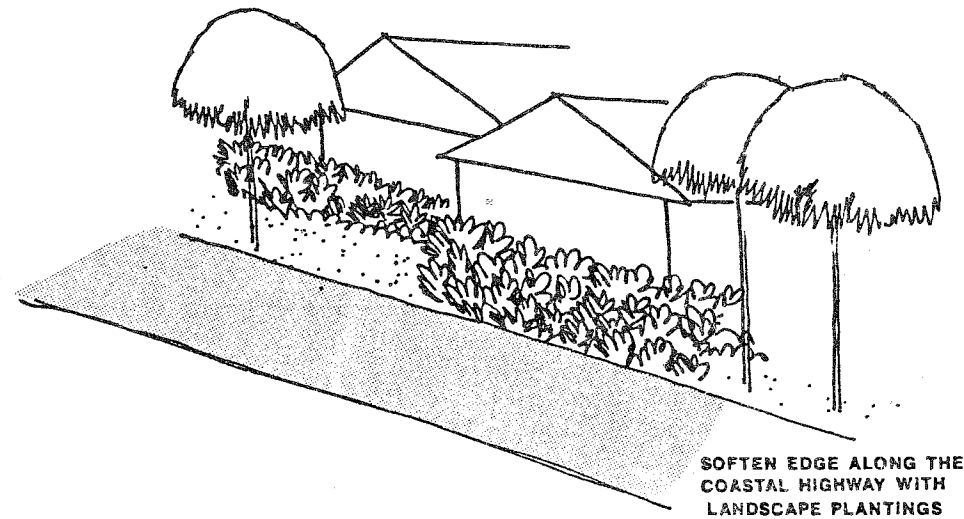
Guideline 4.3

Substantial landscaping should be used to reduce/screen the visual bulk and mass of building(s) and to beautify the coastal highway environment.

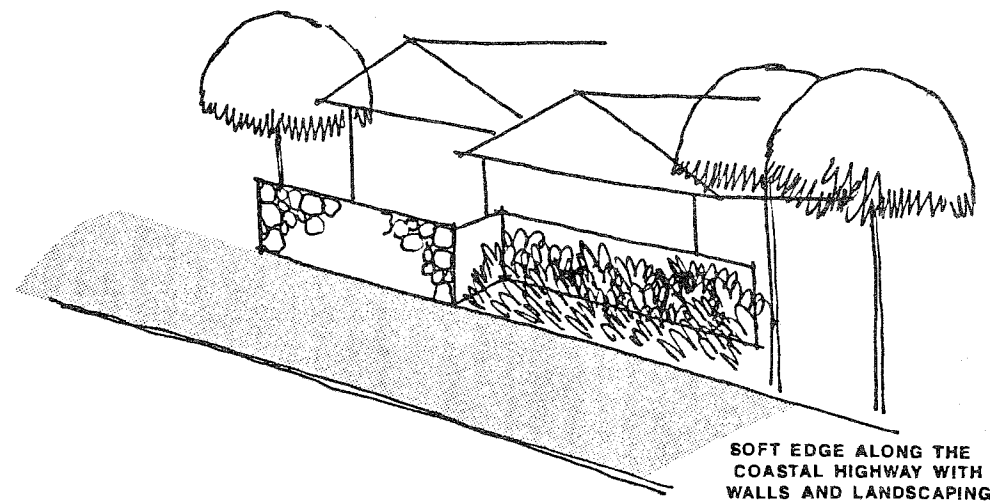


Guideline 4.4

Landscape plantings should be used to soften the edges of the coastal highway. When walls and fences are necessary, they should include landscape plantings in order to establish this soft edge while not obstructing public views from the highway or other viewing points.



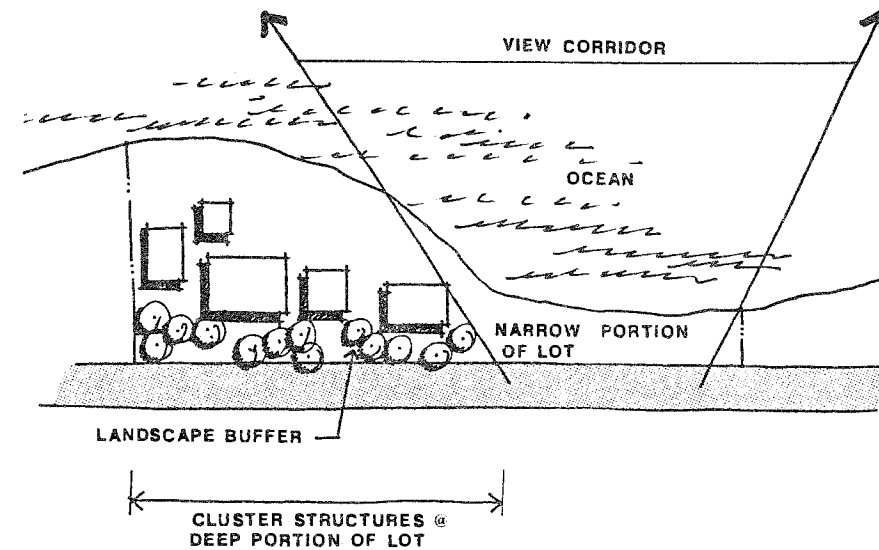
SOFTEN EDGE ALONG THE COASTAL HIGHWAY WITH LANDSCAPE PLANTINGS



SOFT EDGE ALONG THE COASTAL HIGHWAY WITH WALLS AND LANDSCAPING

PRINCIPLE 5

NEW DEVELOPMENTS SHOULD SEEK TO ENHANCE PUBLIC COASTAL VIEWING OPPORTUNITIES.

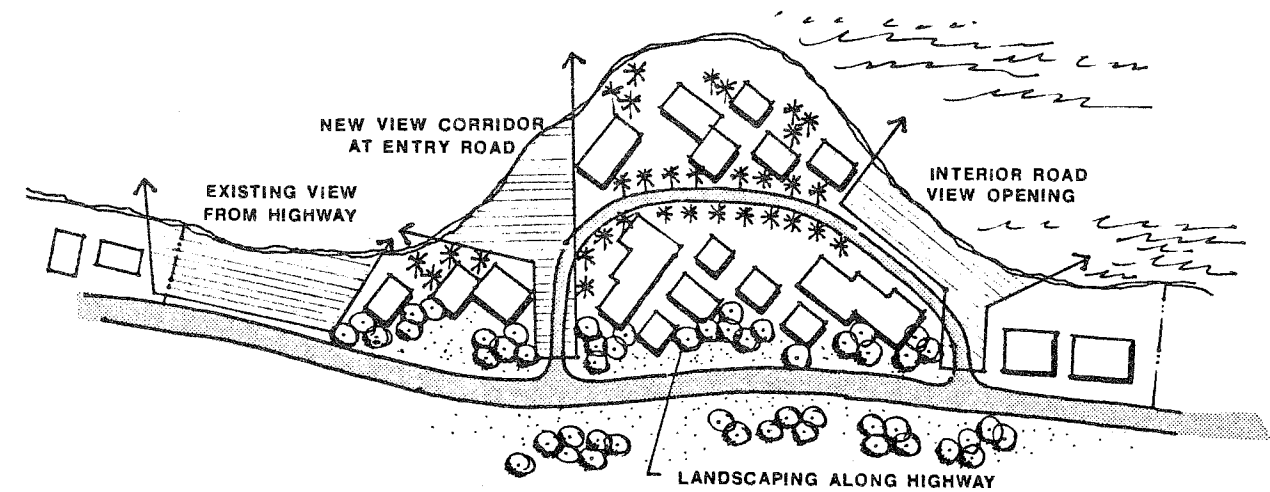


Guideline 5.1

Where practical, development of makai property should emphasize clustering of structures or other site planning methods in order to preserve or create new shoreline view corridors through the site.

Guideline 5.2

A view corridor plan should be prepared for all major new development within the SMA, indicating where view opportunities are being created.



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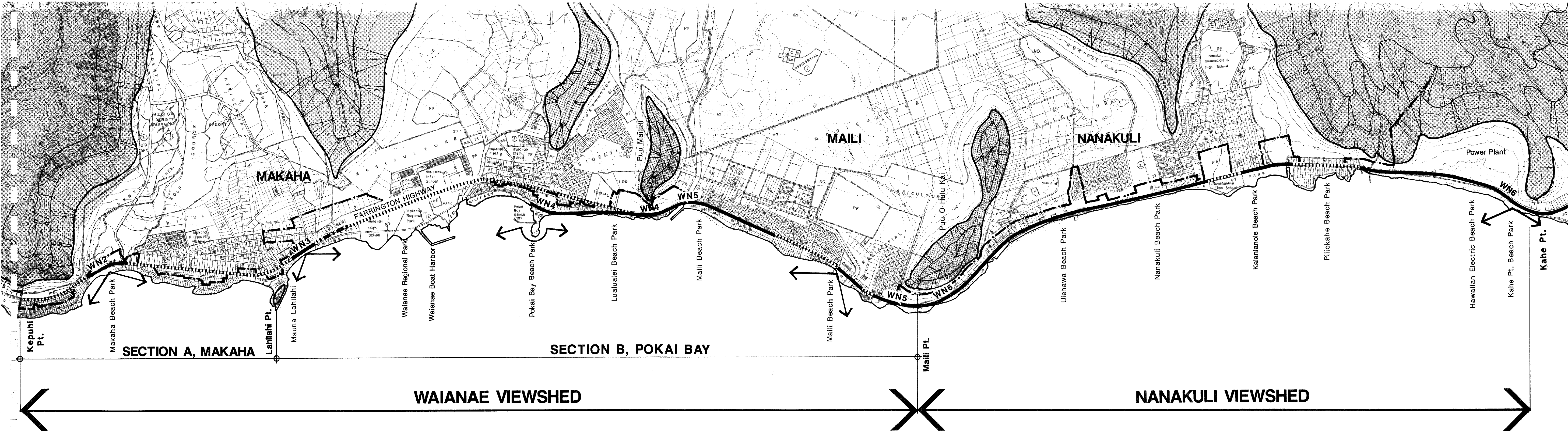
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LEGEND

- SMA BOUNDARY
- COASTAL ROAD
- CONTINUOUS COASTAL VIEWS
- COASTAL ROADWAY
- INTERMITTENT COASTAL VIEWS
- COASTAL ROADWAY
- SIGNIFICANT STATIONARY VIEW
- IMPORTANT COASTAL LAND FORM
- IMPORTANT OPEN SPACE/LANDSCAPE

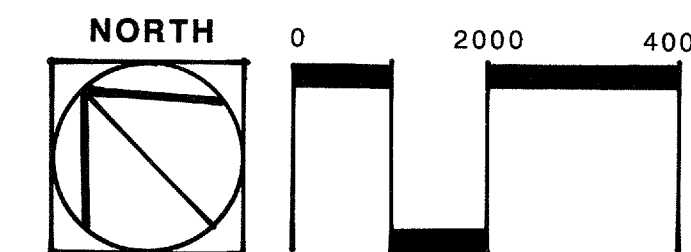
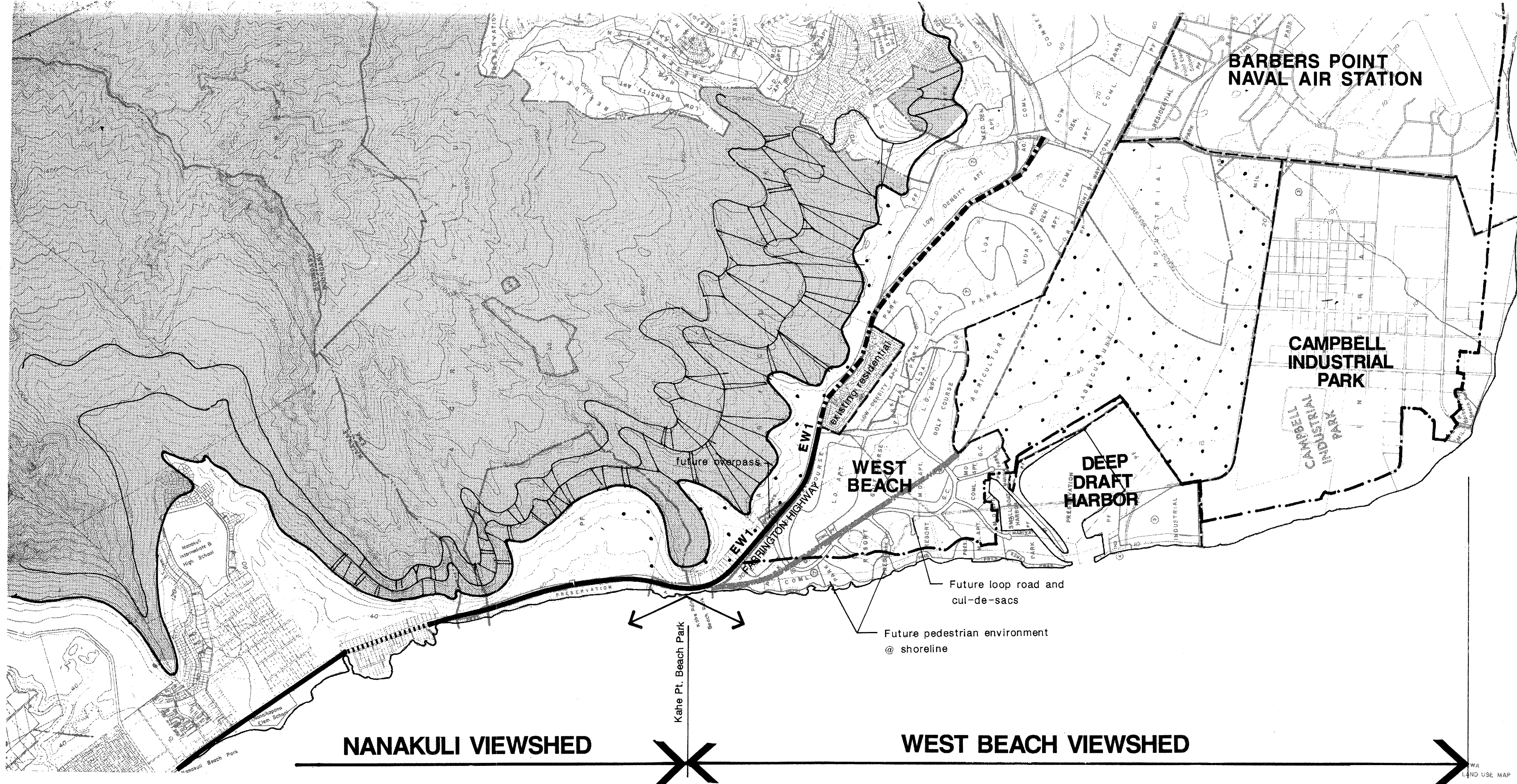


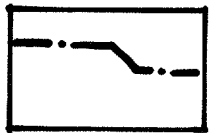

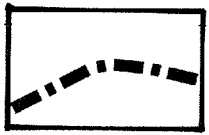

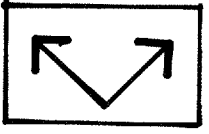
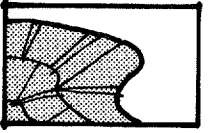
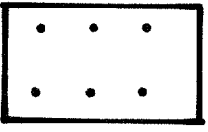
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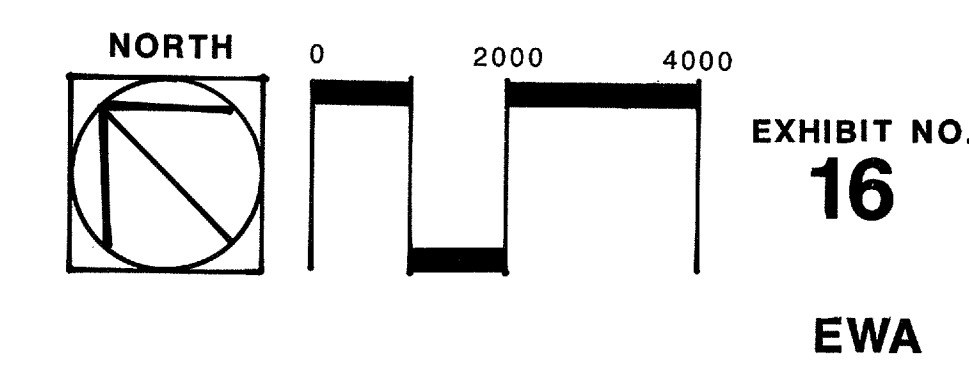
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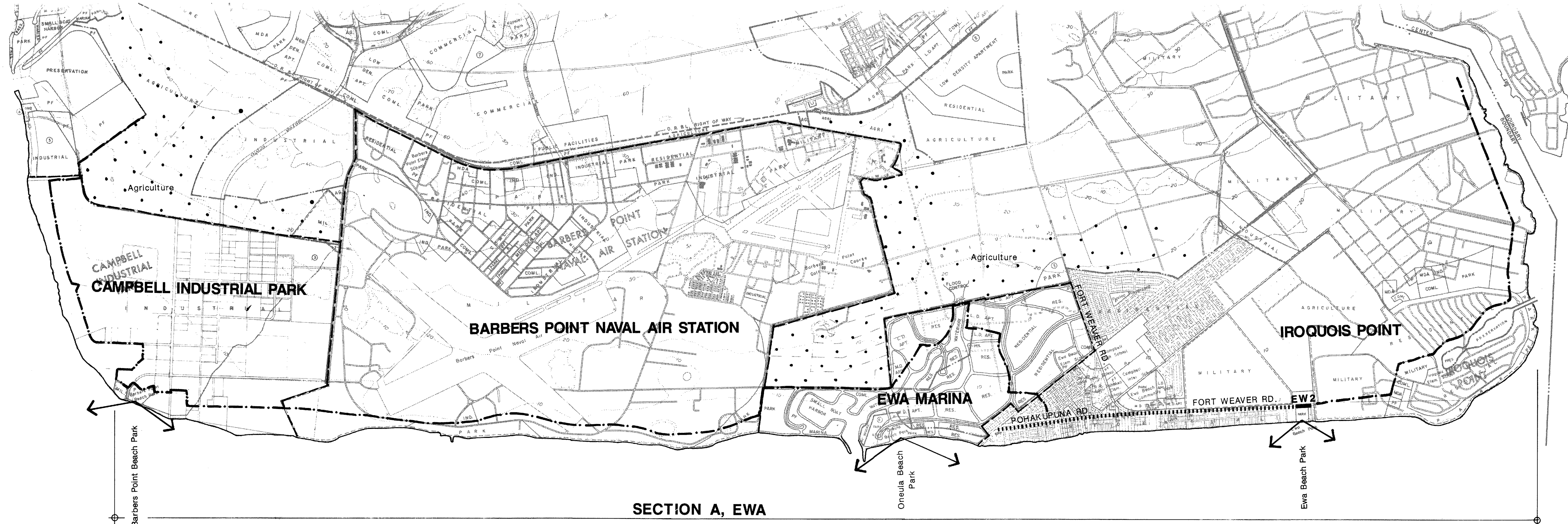
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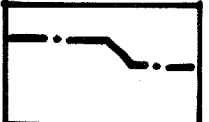



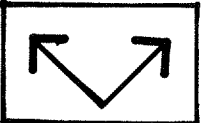

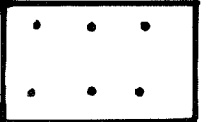
LEGEND

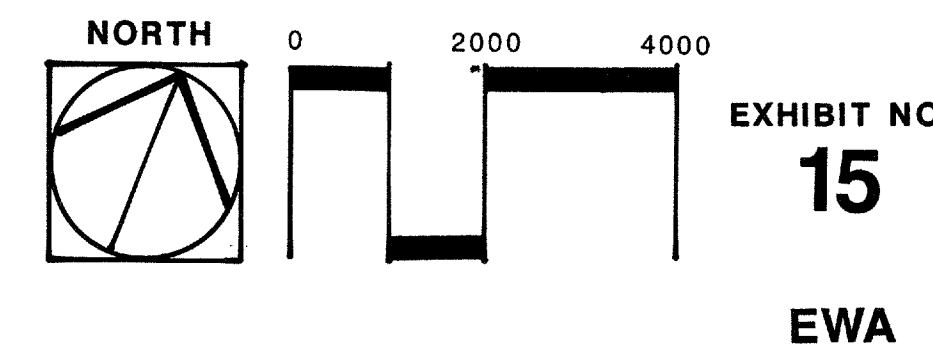
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-  COASTAL ROAD
CONTINUOUS COASTAL VIEWS
-  COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS
-  COASTAL ROADWAY
-  SIGNIFICANT STATIONARY VIEW
-  IMPORTANT COASTAL LAND FORM
-  IMPORTANT OPEN SPACE/LANDSCAPE

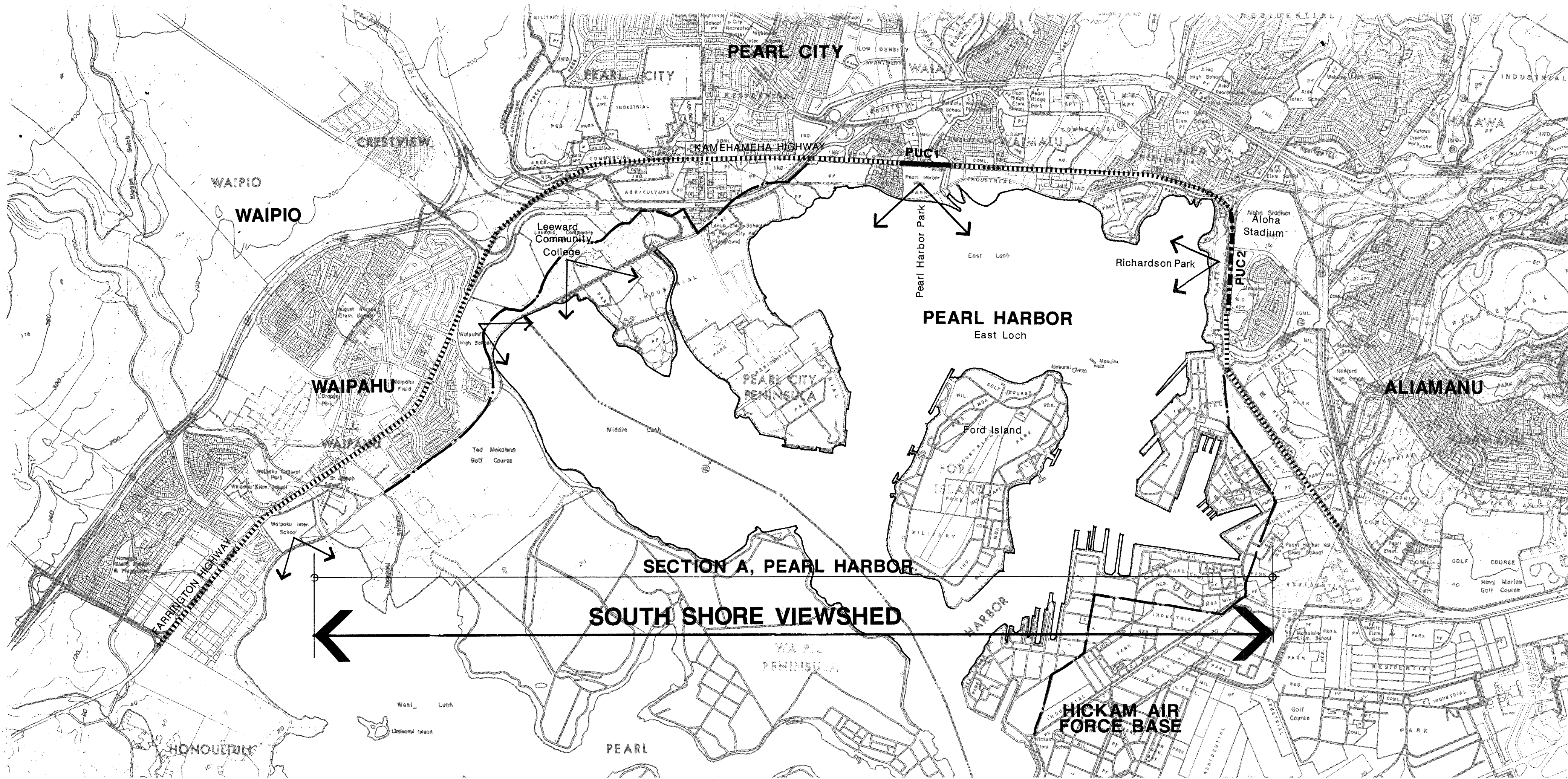




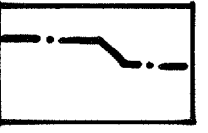

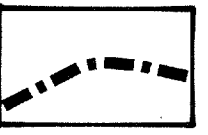
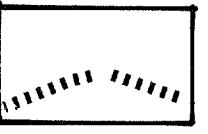
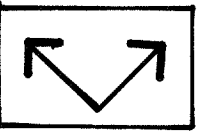
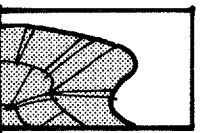
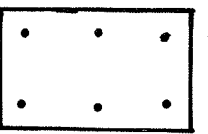
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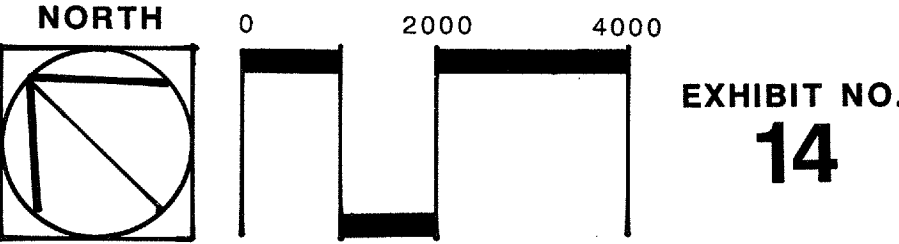
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-  COASTAL ROAD
CONTINUOUS COASTAL VIEWS
-  COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS
-  COASTAL ROADWAY
-  SIGNIFICANT STATIONARY VIEW
-  IMPORTANT COASTAL LAND FORM
-  IMPORTANT OPEN SPACE/LANDSCAPE



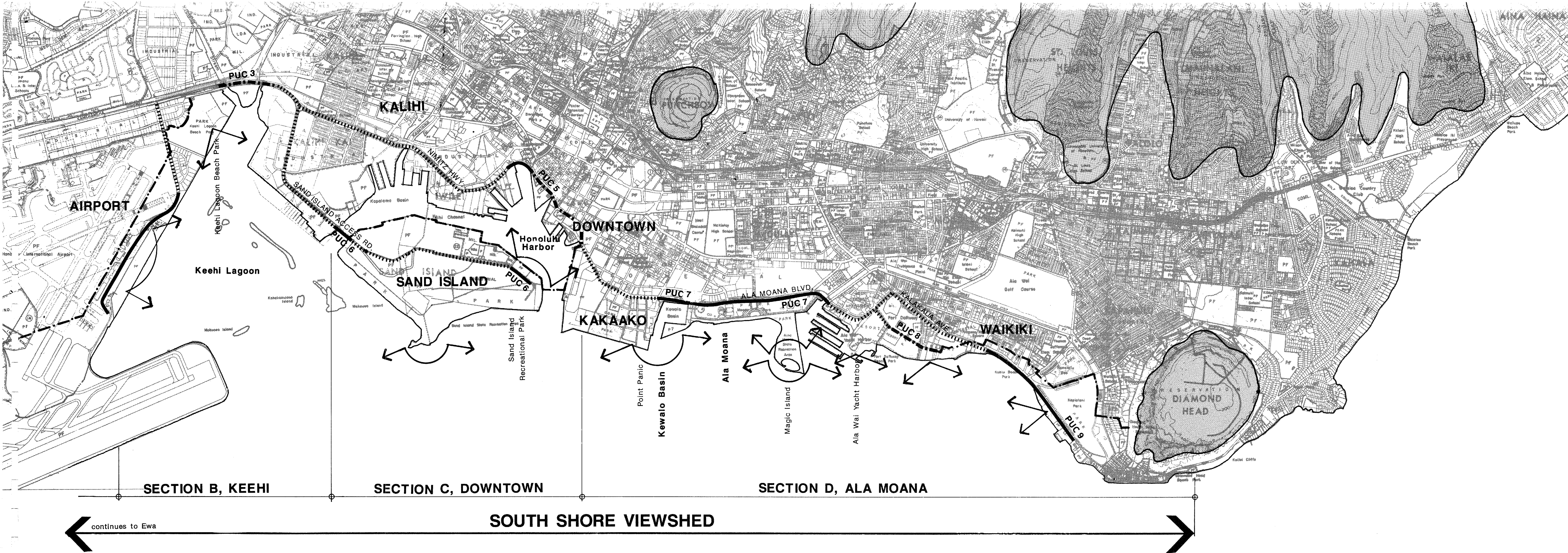


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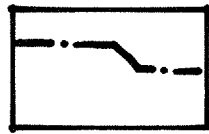

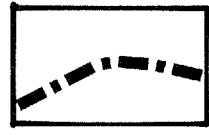
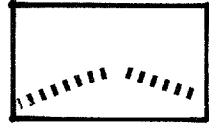


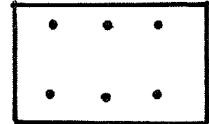
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CONTINUOUS COASTAL VIEWS**
-  **COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS**
-  **COASTAL ROADWAY**
-  **SIGNIFICANT STATIONARY VIEW**
-  **IMPORTANT COASTAL LAND FORM**
-  **IMPORTANT OPEN SPACE/LANDSCAPE**



PRIMARY URBAN CENTER



LEGEND

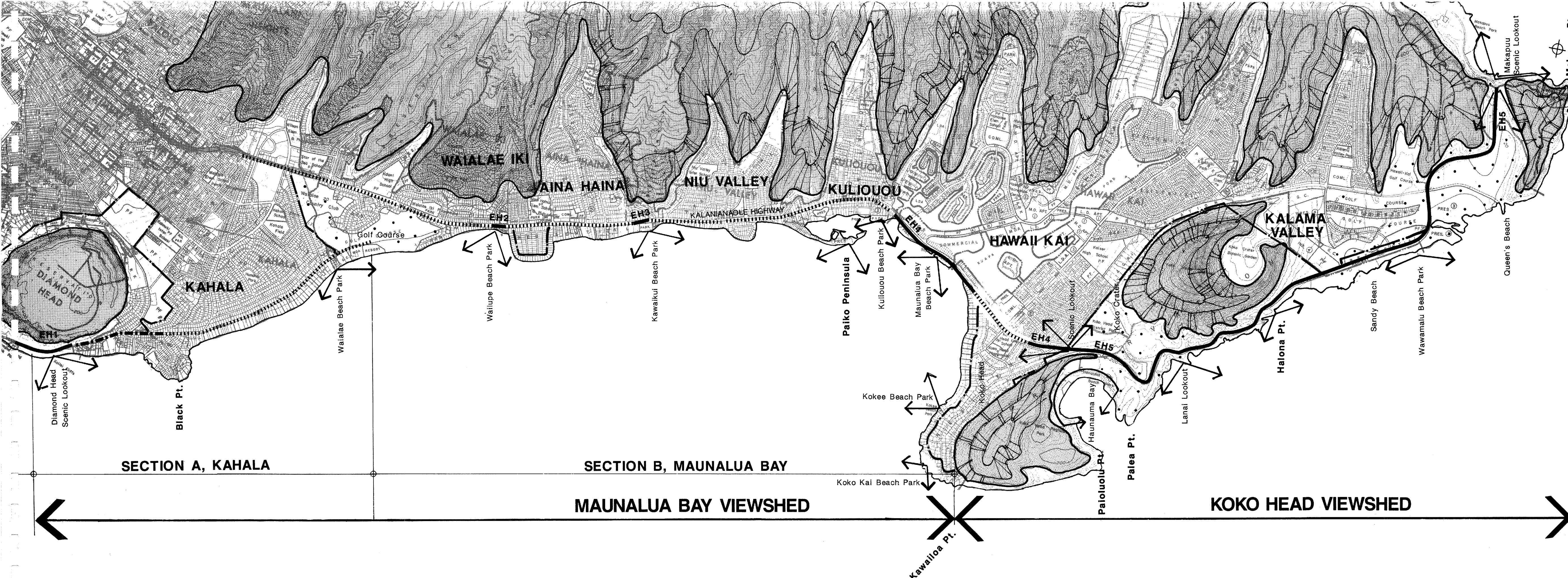
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-  **COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS**
-  **COASTAL ROADWAY**
-  **SIGNIFICANT STATIONARY VIEW**
-  **IMPORTANT COASTAL LAND FORM**
-  **IMPORTANT OPEN SPACE/LANDSCAPE**

NORTH

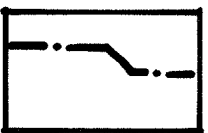

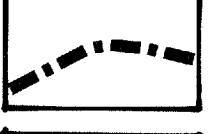


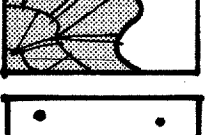
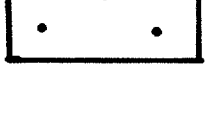
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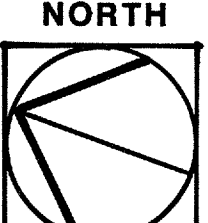
EXHIBIT NO. 13

PRIMARY URBAN CENTER

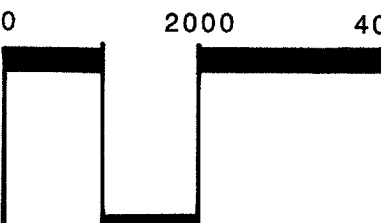


LEGEND

-  SMA BOUNDARY
-  COASTAL ROAD
CONTINUOUS COASTAL VIEWS
-  COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS
-  COASTAL ROADWAY
-  SIGNIFICANT STATIONARY VIEW
-  IMPORTANT COASTAL LAND FORM
-  IMPORTANT OPEN SPACE/LANDSCAPE



NORTH

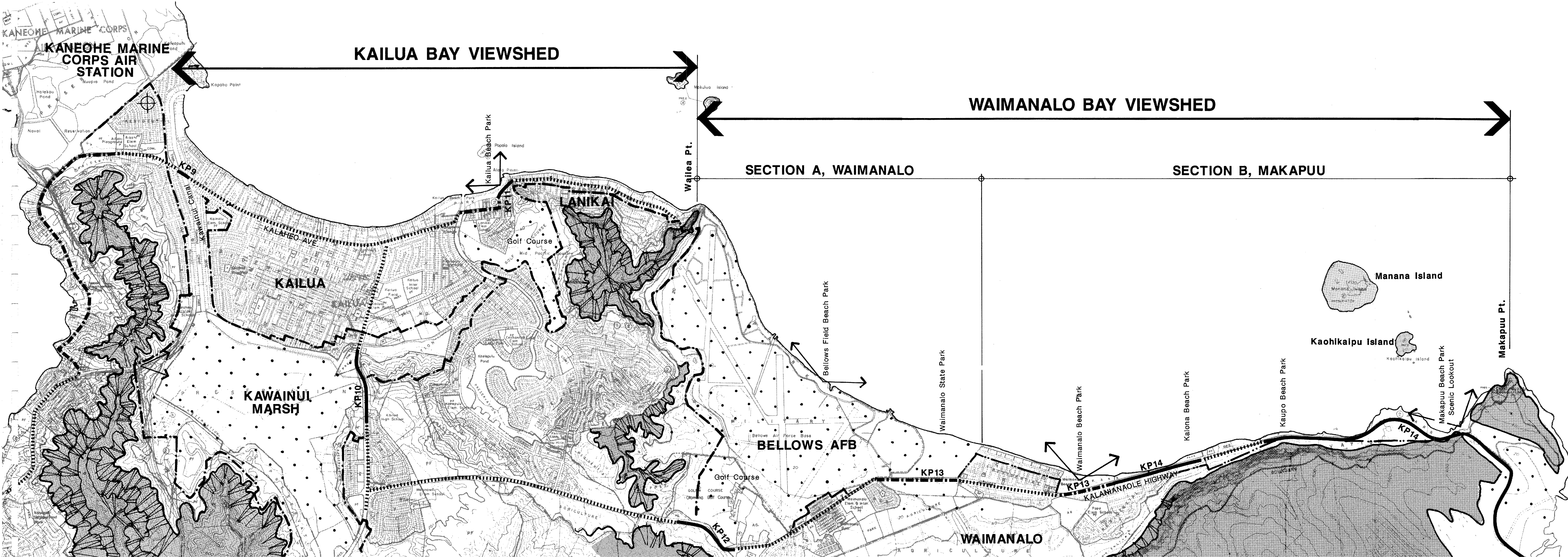


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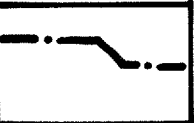



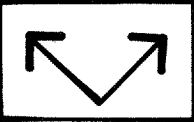

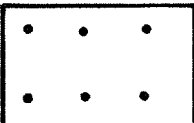
EXHIBIT NO.
12

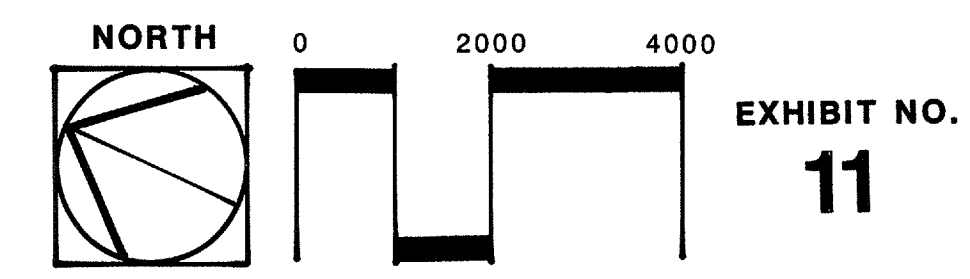
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AR00011953



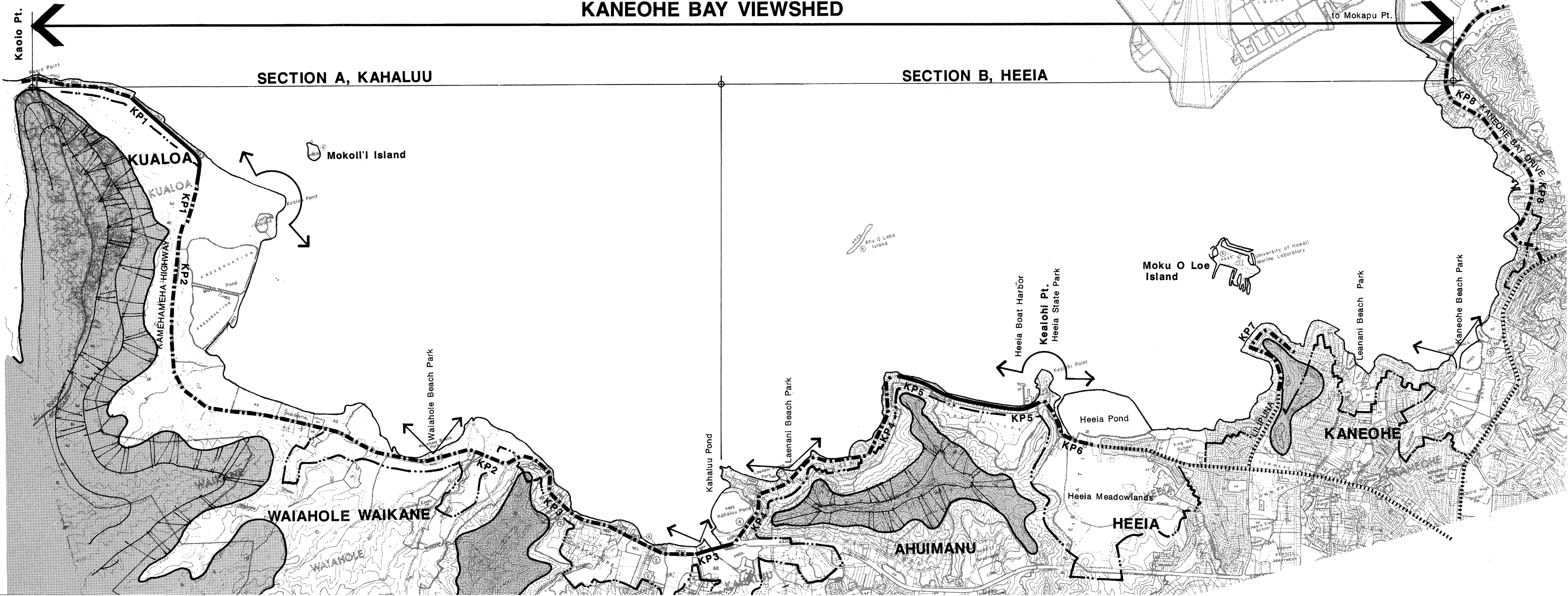
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-  **SMA BOUNDARY**
-  **COASTAL ROAD**
CONTINUOUS COASTAL VIEWS
-  **COASTAL ROADWAY**
INTERMITTENT COASTAL VIEWS
-  **COASTAL ROADWAY**
-  **SIGNIFICANT STATIONARY VIEW**
-  **IMPORTANT COASTAL LAND FORM**
-  **IMPORTANT OPEN SPACE/LANDSCAPE**



KOOLAUPOKO

KANEOHE BAY VIEWSHED



LEGEND

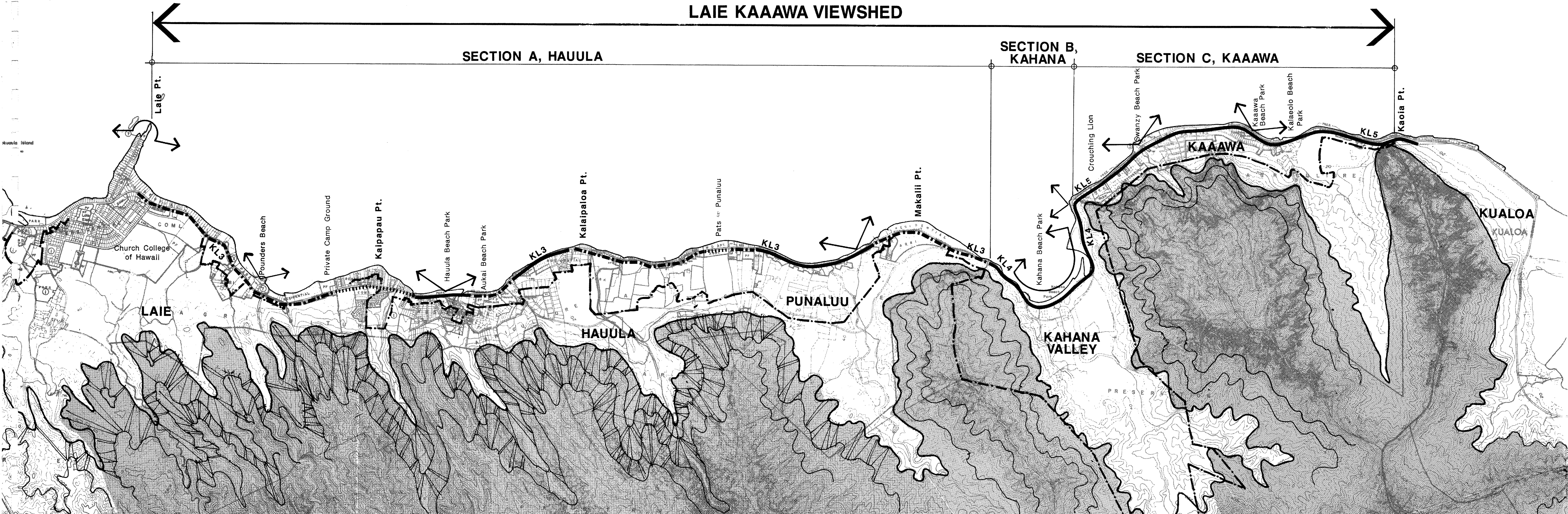
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CONTINUOUS COASTAL VIEWS
- COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS
- COASTAL ROADWAY
- SIGNIFICANT STATIONARY VIEW
- IMPORTANT COASTAL LAND FORM
- IMPORTANT OPEN SPACE/LANDSCAPE

NORTH





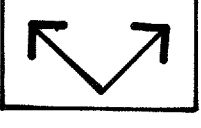
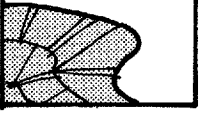
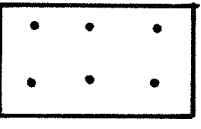
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EXHIBIT NO.
10

KOOLAUPOKO



LEGEND

-  **SMA BOUNDARY**
-  **COASTAL ROAD
CONTINUOUS COASTAL VIEWS**
-  **COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS**
-  **COASTAL ROADWAY**
-  **SIGNIFICANT STATIONARY VIEW**
-  **IMPORTANT COASTAL LAND FORM**
-  **IMPORTANT OPEN SPACE/LANDSCAPE**

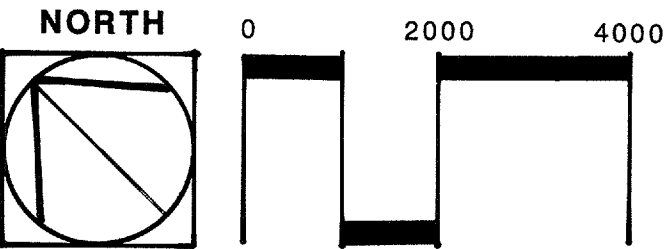


EXHIBIT NO.
9

KOOLAULOA

AR00011956

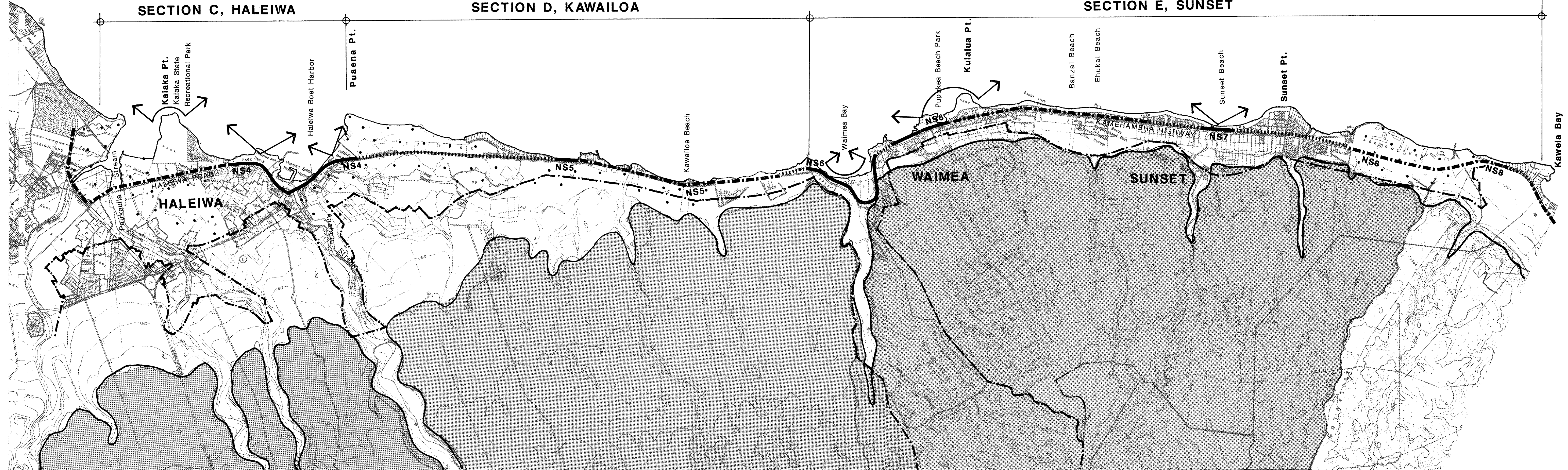
NORTH SHORE VIEWSHED

continues to Kaena Point

SECTION C, HALEIWA

SECTION D, KAWAIILOA

SECTION E, SUNSET



LEGEND

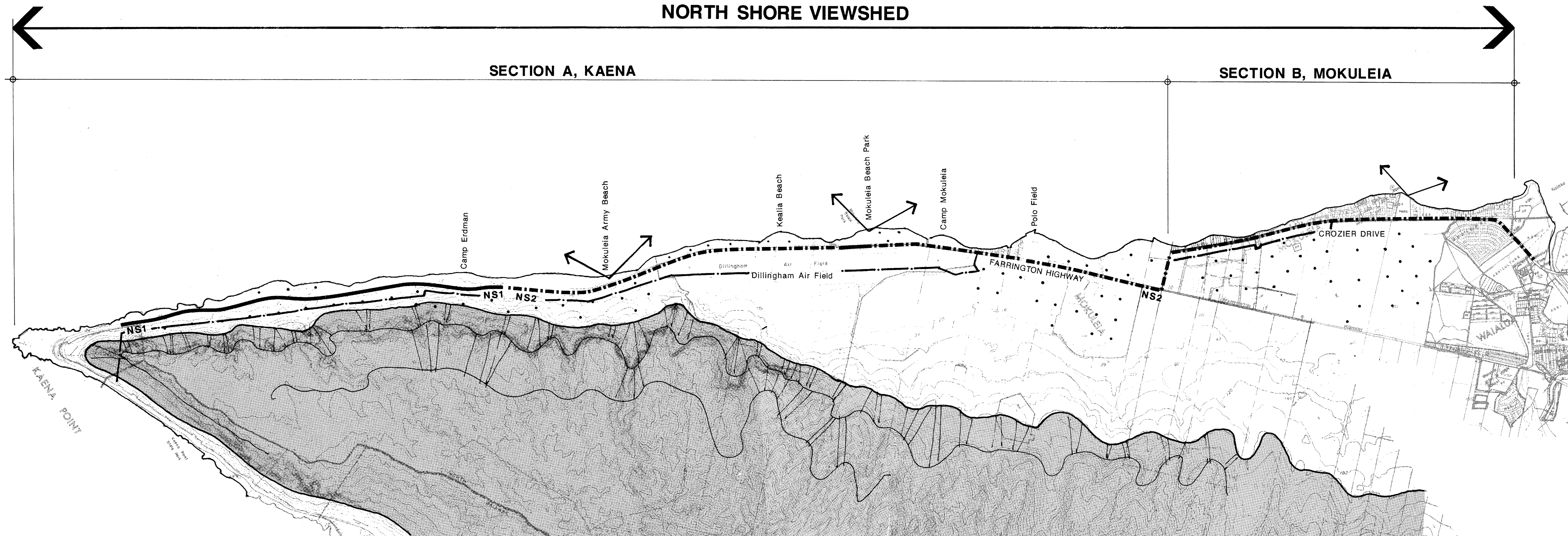
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CONTINUOUS COASTAL VIEWS
- COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS
- COASTAL ROADWAY
- SIGNIFICANT STATIONARY VIEW
- IMPORTANT COASTAL LAND FORM
- IMPORTANT OPEN SPACE/LANDSCAPE

NORTH

0 2000 4000

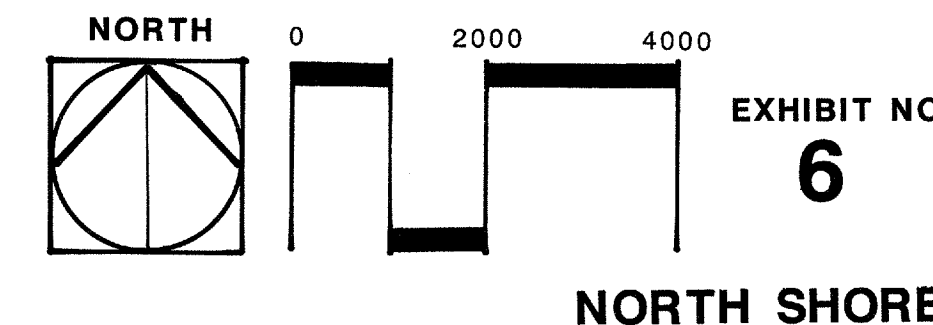
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7

NORTH SHORE

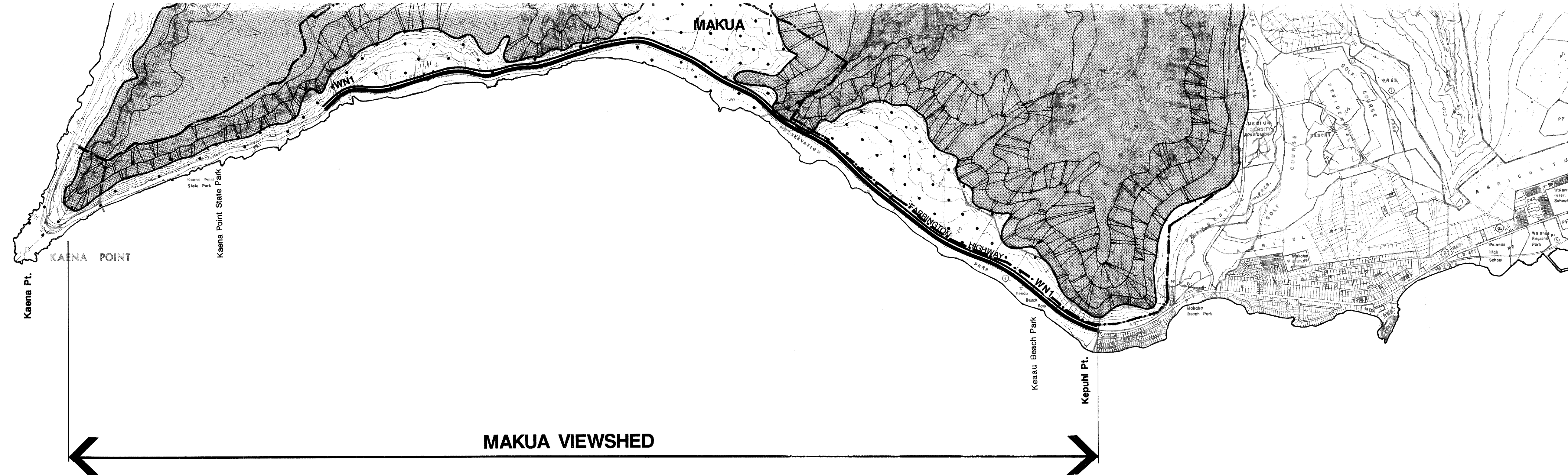


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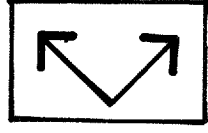

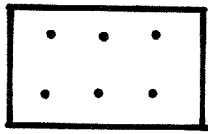
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CONTINUOUS COASTAL VIEWS
- COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS
- COASTAL ROADWAY
- SIGNIFICANT STATIONARY VIEW
- IMPORTANT COASTAL LAND FORM
- IMPORTANT OPEN SPACE/LANDSCAPE

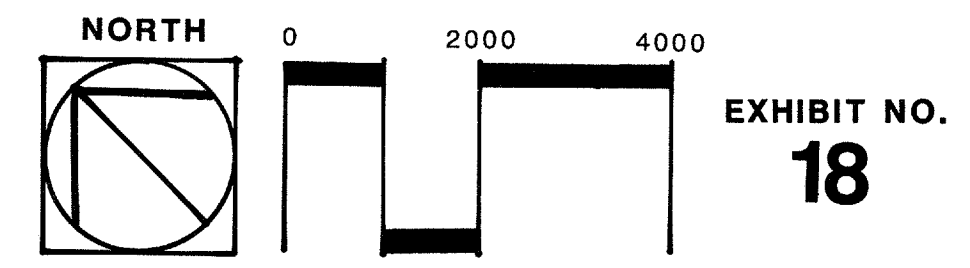


AR00011959



LEGEND

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CONTINUOUS COASTAL VIEWS**
-  **COASTAL ROADWAY
INTERMITTENT COASTAL VIEWS**
-  **COASTAL ROADWAY**
-  **SIGNIFICANT STATIONARY VIEW**
-  **IMPORTANT COASTAL LAND FORM**
-  **IMPORTANT OPEN SPACE/LANDSCAPE**



WAIANAE

AR00011960